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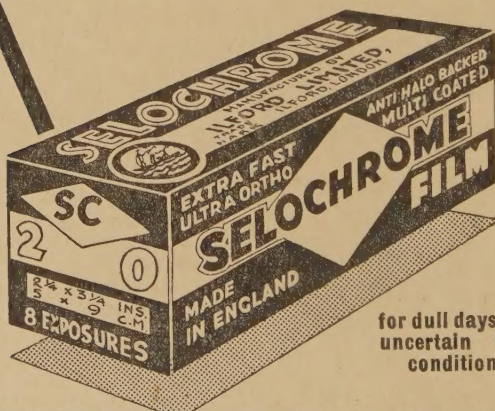
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Information with regard to gymnastic apparatus and the equipment of a gymnasium is given in the "Memorandum on the planning and equipment of a gymnasium for a secondary school." (Physical Training Series, No. 9) (New edition in preparation.)

A NOTE OF INTRODUCTION.

From the days of Plato and Aristotle it has been recognised that one of the essential means of physical and mental education in youth is the proper exercise of the body. It is not only the tabernacle of the human spirit, but the embodiment of man's faculties. They cannot become what they ought to become if the body be not rightly disciplined, and this physical control and culture of the body has been confirmed by the newer knowledge of physiology. We now know, as the Greeks did not, that the nervous regulation of the body is dependent not only upon its general health and nourishment, but upon the exercise of its muscular system. A trained body is, in fact, the sound preparation of a trained mind. The training of both is educational.

Since 1909 the Board of Education have issued, with revisions, a Syllabus of Physical Training based on the Swedish system for use in Elementary Schools. The prescribed course of training is necessarily adapted to the conditions generally obtaining in elementary schools, and is therefore restricted to free-standing exercises which require no apparatus and can be taught in the school playground by non-specialist teachers to pupils between the ages of 5 and 14 years. The Syllabus can, of course, be used for the physical training of pupils within these age limits in any type of school. But developments in recent years both in primary and in further education have provided opportunities for a more complete application of the Swedish system and have necessitated an extension of the Syllabus course beyond the age of 14 years, covering the critical period of transition from childhood to adolescence. Further, the position with regard to physical training in Boys' Secondary Schools requires that some definite guidance should be made available. The Board, therefore, consider that the time is opportune for the issue of the present Reference Book, which makes provision for these further needs, and, together with the Syllabus, covers the whole range of boys' physical training between the ages of 5 and 18 years in all types of school.

The book deals with that part of systematic physical training which is concerned with the development of the body by means of gymnastic exercises devised for the purpose. Games, athletic sports, swimming, and other forms of physical exercise, while of great value for their own particular effects and pleasures, cannot of necessity be designed or modified to serve the immediate purpose of physical development. Most games and sports tend to a somewhat unequal use of the faculties of the body, and lack the corrective effect of ordered movement. The exercises of the Swedish system were introduced to secure certain definite results which can be more or less exactly controlled. Their object is to influence general physique and nutrition, to prevent or correct faulty action and

attitude of the body, and to develop the neuro-muscular system. Such exercises therefore are an indispensable part of physical training, and they form a basis for other bodily activities, because they provide the art and practice of control and the capacity to use the body's strength to the highest advantage. If taught effectually they are a useful preliminary to, and accompaniment of, other forms of physical training, especially those which involve prolonged exertion. They accustom the body to withstand considerable effort without injurious result; they minimise the risk of overstrain, especially of the heart; and they assist weak and under-developed pupils, hitherto unfit to compete with their more vigorous companions, to take their place in the playing field.

Such a book as this would not perhaps be necessary if there were an adequate supply of teachers who had received a complete training in the Swedish system as applied to schools. Generally speaking, however, school work has to be done by teachers who have not had this training. For them a practical guide to the resources and applications of the Swedish system, which relieves them of some of the major difficulties of grading, should be of considerable value. Adequate practical instruction for the teacher both in the exercises and the methods of teaching them is therefore desirable. The practical art of physical training cannot be learned only from a book, and the improper use of the Swedish system is inadmissible. The guidance here provided is thus intended for teachers who have acquired from practical instruction sufficient knowledge and skill to enable them with its aid to conduct gymnastic training on simple lines with a reasonable degree of efficiency.

In view of the wide diversity of opportunities and conditions it would be impossible, even if it were desirable, to frame a definite Syllabus or course of instruction applicable to boys from 8 to 18 years in all schools. A selection has been made of those Swedish exercises which can be used with safety and good effect by teachers who have not had the benefit of a full training. In the progressive lists given in Parts III and IV the exercises are grouped in accordance with the average age of the class at which they may be appropriately introduced in a continuous course of training. They have been arranged in relation to the exercises in the Syllabus in such a way as to secure that at whatever age a boy is transferred from the ordinary elementary school he may experience no break in the continuity of his physical training, provided that up to the time of transference he has received a suitable training in the Syllabus exercises appropriate to his age. This arrangement does not obviate the necessity of ascertaining, by means of a careful test, the actual standard reached by newly transferred boys, in order that the work given them may be properly adjusted to this standard. Whilst being parallel with the Syllabus over similar age groups, Part III provides a complete course of training between the ages of 8 and 18 for secondary school boys who have not attended an elementary school.

The adequate consideration of the physiological principles on which the system is based would require much space and would be out of place in a practical guide to the conduct of physical training. Nevertheless, some knowledge of these basic principles is essential in order that the training may be directed towards its appropriate ends in the most effective way ; without such knowledge the teacher is unable to form a just estimate of the value of his work. A summary statement of these principles will be found in the Syllabus of Physical Training, and their further study can be most profitably carried on as a part of a course of practical training.

In the preparation of this book the Board have had the benefit of advice and suggestion from experienced teachers in various parts of the country. Moreover, the contents of the book have been subjected to practical tests extending over a sufficient period to ensure that they provide what is needed. Here, then, is the guidance, but success rests in the hands of the teacher. However carefully devised, and however conscientiously and correctly followed, exercises must fail of their intention unless he realises that physical training should be a joyous and purposive activity. The inspiration of the teacher is the vitalising power. Where there is happiness, zest, alertness of body and mind, an exaltation of the whole personality of the pupil, there is likely to be the true achievement.

George Newman

July, 1927.

PART I

CHAPTER I

THE GYMNASTIC LESSON.

I. GENERAL CONSIDERATIONS.

A PHYSICAL exercise depends for its effect partly on the movements of which it is composed and partly on the posture maintained while these movements are being carried out. The latter, termed the Starting Position, may be easy or hard to maintain, and can be chosen so as to diminish or increase the difficulty of performing the movements. The difficulty of holding the starting position or of carrying out the movements depends upon the amount of force that must be employed and the degree of muscular co-ordination involved. By choosing appropriate combinations of positions and movements a graded system of exercises may be obtained suitable for pupils of different ages and capacities and producing effects that can be completely controlled. This is the characteristic of the Swedish system of gymnastic exercises.

The exercises given to young children have simple and stable positions that are easily maintained, and movements of a massive kind which do not demand any high degree of precision or co-ordination. As the child grows older new exercises are introduced which progressively call for greater effort and a more exact and complex adjustment of muscular actions.

The demands made upon the pupils must be in proportion to their ability at every stage of their development. Only in this way can a complete and well balanced development of the body be assured. The grading of the exercises to meet this requirement is termed their progression.

Interest and enjoyment in the work are also factors of prime importance. If these are lacking, the exercises, however well performed, will not have the full effect intended, because much of the value of physical training consists in the mental reactions it produces, and these again largely influence the physical results.

The teacher, therefore, needs to have a good knowledge of the characteristic effects and relative difficulty of the exercises he employs, and to cultivate his powers of observation so that he may determine rightly from the pupils' efforts and reactions whether the exercises themselves and his manner of conducting them are suitable. He must also know how to stimulate and control the pupils' efforts so as to obtain the quality of performance that brings out the full value which the exercise has for the pupils at the particular stage of development and training they have reached. Technical skill alone will not enable him to do this; sympathetic understanding and powers of leadership are also needed.

Change and variety are essential for maintaining interest. The Swedish system, with its great variety of exercises, and the many different combinations in which they may be arranged, provides the teacher with ample means for keeping the work fresh and stimulating. But in order to make the best use of the system and to obtain the full value of the available apparatus, he needs to devote great care to the selection of the material for his lessons, and has then to consider how to use this material so that the boys may derive the greatest amount of physical satisfaction and enjoyment. The more the work can be given the character of spontaneous physical recreation the more it will appeal to the boys, and, with due regard to the other objects of the training, this should be the aim.

The interest and enjoyment which spring from novelty and physical satisfaction are greatly reinforced by a measure of freedom, and it should therefore be the teacher's constant aim to train the pupils to carry out his directions with the minimum of intervention on his part and to this end to foster initiative and a sense of responsibility. Of course, at all stages of the training it is frequently necessary for the teacher to control every detail of an exercise, otherwise it would be impossible for him to lay a solid foundation or to maintain a reasonable standard of accuracy. The just balance between freedom and control is therefore an ever-present problem, certain aspects of which are dealt with in the chapter on team work.

In order that the lesson may approximate as closely as possible to the conditions of spontaneous activity, the exercises should be linked together in such a way as to produce a continuous flow of movement, broken at intervals by pauses for rest when the need for them is felt. The principle of continuity, however, cannot be applied indiscriminately without sacrificing other important objects of the training. With younger boys its application in certain directions is very limited, and with pupils of all ages there is often occasion to treat an apparatus exercise as an isolated event. Any new exercise which requires to be taught by way of careful demonstration and detailed correction of the pupils' initial attempts must necessarily be isolated for the purpose, but the aim should be to bring it into the main current of the work as soon as the pupils have grasped it. It will be found, however, that for the most part new exercises and new combinations can be introduced by making successive small changes in the current sequence of movements without any definite instruction, merely with a brief mention of the change to be made, and with scarcely a check in the flow of the work. Even this may be unnecessary; a change in the commands may do all that is required. There is no danger that this method of making progress will produce a crop of faults which practice will confirm, provided the progressive steps are suitably chosen and the work as it goes forward is properly graded and controlled. The pupils' first attempts may be very far from reaching perfection, but if each step forward is not too large and is securely based on well-practised work, the pupils will have no difficulty in understanding what is

required and will readily respond to the new demands. The exercises, in fact, come almost to teach themselves.

The desired continuity and flow of movement is secured in different ways according to the nature of the exercises and the age of the pupils. Free-standing exercises may be linked together into a continuous sequence of movements, in which local fatigue is avoided by frequent changes of muscular activity. A sense of fatigue may be induced by a too prolonged concentration of attention, and therefore the sequence of movement should be of moderate length. The question of giving relief by rest or change of work is considered in the section on breaks.

The following exercises may serve as an example of a linked series, the method of connecting them being sufficiently shown by the commands :—

(St.) Hl. rais.

(St.—Hl.Ra.—U.Bd.) Slow Kn. bend. with Arm. stretch. s.

(St.—Asd.—Hn.Th.) Rhyth. Hd. press. b.

(St.—Asd.—Arm.D.—Tr.F.) Rhyth. Tr. press. d. to touch floor between legs.

(St.—Crh.) 2 Lg. stretch. s.

Marking time.

Heel raising by numbers—one! two! one! etc. (stopping with heels raised). Arms—bend! Slow knee bending with arm stretching sideways, by numbers—one! two! etc. Heels—lower! Feet astride, and hands on thighs—place! Head pressing backward—begin! Stop! With loose arms, trunk forward—bend! Trunk pressing downward, touching the floor as far backward as you can—begin! Stop! With heels together, crouch—down! Both legs stretching sideways—begin! Stop! With a jump to attention—up! Mark—time! Class—halt!

Another example of a linked series of free-standing exercises is given later.

Continuity in apparatus exercises cannot usually be as complete as in free-standing exercises, and generally has to be obtained in a rather different way. It is seldom possible to connect these exercises together in the manner illustrated above. They should be arranged in groups according to the position of the fixed apparatus and the possible distribution of the moveable apparatus, so that the boys may turn immediately from one exercise to another. To obtain the full advantage of this method there must be no waiting for turns at the apparatus, or, at any rate, it must be possible to reduce the time spent in this way to very small proportions. This can be achieved when there is sufficient apparatus for the whole class to work together under the teacher's directions, or by using the team system (when the boys are old enough) and giving to each team a different group of exercises so arranged that all the apparatus required is close at hand. The distribution of the fixed apparatus in the gymnasium to facilitate this method of working

is considered in the Board's "Memorandum on the planning and equipment of a gymnasium for a secondary school." (Physical Training Series, No. 9).^{*} Examples of the method are given in the Table Scheme below.

II. THE CONSTRUCTION AND USE OF GYMNASTIC TABLES.

1. *The selection of Exercises.*

In selecting the exercises which are to compose the lesson, the two most important things to remember are (1) that all the elements needed for a complete and well-balanced physical development should be represented in due proportion, and (2) that the lesson as a whole should provide a period of physical exercise that is stimulating and satisfying. The exercises must be neither too easy nor too difficult for the stage of development reached by the pupils, who must be made to extend themselves but must not be fatigued. Account must be taken of the age and progress of the class, the accommodation and equipment available, and the weather and other conditions.

In deciding on the number of exercises to be included in the lesson a rough calculation should be made of the amount of time that would be occupied by each of the proposed groups of exercises, whether free-standing or on apparatus, and in doing this it has to be remembered that each movement or exercise needs to be repeated a sufficient number of times to leave a definite impression. The demands made by each sequence of exercises and by the lesson as a whole must be carefully weighed. The important matter of securing change and variety is considered in the next paragraph.

2. *How to secure change and variety.*

The master who has not had much special training in the teaching of physical exercises may find it expedient to adhere to one simple form of lesson (or table scheme) and to develop the exercises in a fairly continuous progression from table to table. A scheme to suit any particular case may be worked out with the aid of the specimen schemes given on pages 7 and 8, using the first if apparatus is available, and the second if there is none ; or the set form given on pages 8 and 9 may be used. The development of the different types of exercises can be easily followed in the Progressive Lists. But this simple and easy method has the great disadvantage of sacrificing most of the possibilities of getting change and variety in the work. The unvarying arrangement of the lessons and the general sameness of the exercises are apt to induce a feeling of tedium.

A much better plan for those who have the requisite knowledge and opportunity is to make each table as different as possible (within certain limits to be explained presently), in both form and contents, from its immediate predecessor. The great resources and flexibility

^{*} Published by H.M. Stationery Office.

of the Swedish system make it an easy matter to obtain such wide contrasts between one table and another as fully to satisfy the natural and healthy desire for variety. The table-scheme permits of wide variations in the arrangement of the exercises, and exercises of very different form can be chosen to give the same general effect. Compare the two contrasted tables given on pages 36, 37 and 38.

Tables such as these require for their construction more time and thought than those drawn up on a set plan, because for each new table the teacher has to devise fresh combinations of exercises, new groupings of the apparatus, and new arrangements of the class. But the labour involved is fully rewarded by the pupils' unflagging interest in the work.

3. *The form of the table.*

While a wide latitude in the arrangement of the exercises in the table is permissible and desirable, a general ground plan for the normal tables is imposed by the following considerations.

(1) The exercises which make a considerable demand for general or localised effort should not be crowded into the beginning of the lesson, because this would tend to exhaust the energies of the boys before the later exercises were reached. It is preferable to start with moderate exercises, and to distribute the more difficult ones over the lesson, reserving the most strenuous until the class has thoroughly warmed to the work.

(2) It is desirable that the teacher should himself take the class as a whole in the initial exercises. This is the quickest way of getting the class to settle down to work, and of establishing a sense of ordered, purposeful activity. After this, if team work is used, the class may be broken up into teams for apparatus exercises and work more or less under the direction of their leaders. When the work has gained a strong and lively impetus a still freer order may be adopted, giving a wider scope for individual initiative. This is the occasion for the more individual and recreative exercises.

These considerations suggest that the table should have two chief parts, the first containing the more formal exercises, the second the more recreative, and that the first part should again be divided into two sections, the first for free-standing exercises, the second for either free-standing or apparatus exercises. It is desirable, therefore, that the work should be arranged on the following lines :—

PART I.

Section 1.—The lesson should begin with a short and sharp spell of free running to stimulate the circulation and breathing and to set the body in tune for physical work. This should be followed by a set of free-standing exercises carried out in class formation, and, as far as possible, linked together as described above. Exercises which promote a good carriage of the body should always be included. With older boys this initial set of exercises may be expanded so as

to bring all parts of the body into moderate activity, thus constituting a little table in itself and providing a preliminary warming up of the whole machine.

Section 2.—This section should contain the more difficult localised exercises, in which for the most part apparatus is used. Team work is appropriate when the boys have learnt to work in this way. Marching and running may be conveniently included in this section.

PART II.

This should contain the exercises, such as jumping and vaulting and the more recreative exercises generally, which make the largest demands for a concentration of energy and a free use of all the bodily powers.

The lesson may be suitably concluded with a breathing exercise.

The exercises contained in all three sections of the table may be arranged in any order that will best secure the desired change and variety from table to table, or that will permit of the exercises being linked together in the most suitable way. Whatever arrangement may be adopted, care must of course be taken to avoid local and general fatigue by a proper distribution of work between the different parts of the body and a suitable alternation of harder and easier exercises.

The general plan of the Table thus sketched out may be varied to suit any particular occasion, and some such variations are discussed later.

When the teacher is taking the class as a whole at apparatus exercises, nothing is so wasteful of time and destructive of interest as going from one apparatus to another and taking only one exercise on each. After each exercise the class is moved about the gymnasium and re-formed, fresh apparatus has to be made ready and cleared away and when the results are so small this becomes an irksome labour, particularly if the process has to be repeated later in the lesson. There are various ways of avoiding or minimising this waste of time and effort. One method is to arrange the exercises in such an order as will permit of two or three, or even more, being taken in succession on one apparatus before a move is made to another. If, for example, in planning a table it is desired to include a new Spanning exercise at the wall bars, this might be followed by the Heaving exercise and perhaps also the Abdominal exercise on the same apparatus. Or it may be intended to teach a Lateral exercise in which support is obtained from the beam ; it might then be convenient to arrange this exercise in sequence with the Heaving and Dorsal exercises. Again, the Spanning and Abdominal exercises may both require the use of the wall bars and be grouped together ; and the Heaving, Balance and Lateral exercises arranged for the beam. In this way many different combinations can be

obtained. If several kinds of apparatus are to be used one after the other, much time is saved if all are set up and adjusted before the series of exercises is begun and cleared away together when it is finished. Different pieces of moveable apparatus can be brought together or arranged with the fixed apparatus so that the boys can turn from one to the other without re-forming or moving about the gymnasium. For example, the benches can be arranged at the wall bars so that the class may take a Spanning and a Heaving exercise on the bars and at once pass on to an Abdominal exercise and another Dorsal exercise on the benches with the feet supported on the bars. Similarly, the benches can be arranged with the beams so that the boys may go directly from a Heaving exercise, taken "in stream," to a Balance walk on the bench. Here, again, a great variety of combinations is available.

The preceding remarks have also an important bearing on the methods of team work and on the equipment of the gymnasium. These matters are considered in later chapters.

A Table Scheme embodying the foregoing ideas is given below. This shows the general plan on which tables should be constructed. The actual arrangement of the exercises in each section needs to be thought out for each table, unless, of course, a set form is employed.

GENERAL SCHEME FOR A TABLE OF GYMNASTIC EXERCISES.

Part I.

Section 1.—Running (informal).

Free-standing exercises, including Head exercises and Trunk bending downward, and a Skip jump or Introductory jump.

Section 2.—Dorsal exercise (apparatus or free-standing).

Heaving exercise (apparatus), or arm exercise (free-standing).

Balance Exercise (free-standing or apparatus).

Abdominal Exercise (apparatus or free-standing).

Lateral Exercise (apparatus or free-standing).

Marching and running.

(*Note.*—All or any of the exercises in this section can be taken either with apparatus or free-standing.)

Part II.

Vaulting, free jumping, agility exercises, gymnastic games, boxing, exercises that give practice for field games and athletics, etc.

Breathing.

A table need not include all the types of exercises mentioned in this scheme, *provided that the body is thoroughly exercised all over.* For example, the Balance exercise and the marching may be treated

as alternatives, or a leg exercise can be substituted for them ; again, the abdominal and lateral exercises can be used as alternatives. This permits of shortening the table.

Any type of exercise may be duplicated as circumstances require, either in its own or another section of the table, and preferably in a different form. Since vaulting is the finest expression of athletic gymnastics for boys, demanding for perfect performance the highest measure of controlled strength and agility and no little pluck, many teachers will no doubt desire to include some vaulting in every normal lesson.

Exercises may be transferred from one section or part of the table to another for the purpose of securing continuity in the work, or to obtain a proper balance in the lesson, or for the sake of convenience ; e.g. time may be saved and convenience served by taking a vaulting exercise on the beam in the second section of Part I immediately after a balance or other exercise on the beam. Interchanges of this kind between the first and second sections are often desirable when there is a scarcity of apparatus.

No apparatus available.

When no gymnastic apparatus is available, the following scheme will serve as a basis for the construction of tables. As in the preceding example, the table falls naturally into two parts, the more formal and the more recreative.

TABLE SCHEME FOR USE WHEN NO APPARATUS IS AVAILABLE.

Part I.

Running. Breathing.

A Skip jump or the like.

A short series of the easier free-standing exercises, having a general corrective effect on the carriage of the body.

A " break " which may sometimes take the form of a short general game.

A series of more difficult free-standing exercises. These exercises may partly or wholly duplicate those of the first set. Introductory jumping exercises might conveniently be taken here. Some marching and running.

Part II.

Free Jumping, games, boxing, etc.

Breathing.

The exercises would, of course, be chosen, and the table filled out or reduced in length to suit the age of the boys, the length of lesson, the temperature, etc.

PERMANENT FORM FOR TABLES.

For those who feel they need to follow a set scheme, the following would provide a suitable basis. It can be expanded as required by duplicating the exercises.

Part I.

Free running. Breathing.

Head pressing backward and Trunk bending forward and downward.

Arm exercise.

Break.

Leg, Balance and Introductory Jumping exercises.

Trunk turning and bending sideways.

Marching and running.

Part II.

Free Jumping, games, boxing, etc.

Breathing.

A limited equipment of apparatus available.

If there happens to be one kind of gymnastic apparatus available, such as a beam or gymnastic benches, the scheme for a table of free-standing exercises can be employed, with exercises on the apparatus introduced in appropriate places ; and, generally, where the apparatus is limited as to amount or type, the table can have any intermediate form between those of the two Schemes given above.

4. The division of the lesson period.

It is not desirable to lay down any definite division of the time between the different parts of the lesson. This will depend largely upon the available accommodation and apparatus, upon the total length of the lesson, and whether it is desired to pay special attention to any particular activity or phase of the work. It may be said quite generally, however, that for a normal lesson in which apparatus is used two-thirds of the time might suitably be given to Part I, especially if the lesson is of 40 to 45 minutes' duration. If the lesson is shorter than this, it would probably be as well, occasionally at any rate, to give a smaller proportion of time to Part I, so that the valuable and specially interesting exercises of Part II may have their due. If no apparatus is available half the time might be given to each part of the table.

If extra time is required for teaching some apparatus exercise or combination of exercises in Section 2 it might be obtained by taking the remainder of the exercises in this section free-standing instead of on apparatus, or the time given to Part II might be shortened for the occasion. If team work is employed, this trespass upon the time for other exercises can usually be avoided by teaching the new exercise to one team at a time while the remainder are performing other exercises.

Extra time can be provided for Part II by taking some or all of the exercises in Part I free-standing ; or some of these exercises can be omitted. In the latter case, however, the lesson can hardly

be regarded as retaining its normal balance, it would approximate to the occasional period which is given up wholly to recreative activities such as organised team games or boxing.

III. PROGRESSION.

Except in the earliest stages of the training, every new exercise should be based on and developed from others previously learnt. Unless these earlier exercises have been well practised and can be performed with a reasonable degree of accuracy, no satisfactory advance can be made. It is necessary to remember this when constructing a table which is to contain some new exercises. The exercises from which the new ones are to be developed will need to be reviewed. The first lesson in the new table should therefore consist almost entirely of known exercises ; and these should be developed gradually, lesson by lesson, until the final form of the table as originally planned is reached, at about the middle or towards the end of the period during which the table is in use.

Each table, therefore, will contain within itself a little scheme of progression, starting with a review of old work and proceeding from this secure foundation to a definite advance. Even if no actual progress is to be made in any group of exercises, it will be well to cast back a little to earlier types in the first lessons in the table. In this way a constant revision of the fundamental positions and movement can be assured, which is of great value in maintaining the integrity of the training and permits of a more rapid advance than would otherwise be possible.

This method of progression, i.e., by taking up old work that has been dropped for a time and developing it, gives to the training much greater interest and value than can be obtained by a continuous and uniform advance from table to table. The old exercises, now in fresh combinations and sequences, are returned to with renewed interest, and in the interval a general advance has been made which enables the pupils to put more into and get more out of them. Though the actual advance made in any one table may not be great in relation to the training as a whole, yet the rapid development of the old exercises into the new gives an encouraging sense of progress.

It follows that most of the exercises given in the Progressive Lists, even the earliest, have permanent value throughout the training. An exercise must not be lost sight of when the general line of advance has passed beyond it. Some exercises need to be used constantly in the same or almost the same form, others give their best value when taken up from time to time in new sequences. It is largely because of this continuing value of the exercises that the Swedish system provides so great a wealth of material. The exercises given in the Progressive Lists under any one age-group are not generally sufficient by themselves for a full and satisfactory training at this age ; they are not meant to stand alone, but to

represent the front line of progress supported by the exercises taken in previous age-groups. Moreover, the Progressive Lists are not exhaustive, but are intended to be rather a guide to progression and to furnish the staple materials which may be combined to form a great variety of new exercises.

IV. BREAKS.

The physical exercise lesson is not of such length nor is it conducted in such a way as often to call for periods of actual physical rest, though occasionally after a particularly strenuous exercise a short breathing space may be desirable. But however skilfully the formal exercises, and especially the free-standing exercises, may be arranged and conducted, their performance requires a degree of attention that quickly calls for relief, especially with younger boys. The kind of relief needed is found in a change rather than a cessation of work. Relief may be given immediately by introducing some brisk informal movements which the boys are free to carry out as they will. Movements used in this way are called "breaks." They may be used freely with younger boys, and even with older boys occasions arise when the introduction of a break does much to cheer up the class and set it going again with renewed vigour.

A short list of breaks that have been found effective is given below. It illustrates the kind of thing that is required, and the teacher can invent others for himself. Some of the exercises in the Progressive Lists under the head of Game Forms will be found suitable when known to the class, and also simple games in which all are actively employed.

1. Sitting down cross-legged or with the legs straight, lying down on the face or back; done as quickly as possible on the command—*Down!*
2. Turning with a jump to face named objects or points of the compass.
3. *Out of my sight—go!* If in the playground, the boys return on the whistle.
4. "Touch Wood." All run to touch wood or other named substance, the laggards being "Caught out."
5. Run anywhere and stop in a named attitude at whistle. Instead of running, the boys can be told to crow-hop, or hop on one or both feet. The first and last to respond to the whistle can be named by the teacher.
6. Run to form a circle, holding hands and skip round (both ways). The whole class can form one large circle or each team its own.

7. Changing Corners. Each team runs to a different corner of the gymnasium or playground, and teams change corners, two at a time, at the teacher's command. Different steps can be indicated by pre-arranged signals.
8. War Dance, each file counter-marching.
9. Files run and change places. The outside files change with their adjacent inside files. The files can first sit or lie down (see 1).
10. Race round partners in opposite files and back to places. *Outside (Inside) files round partners—go!* The two files called upon race each other to see which can re-form first. Pass behind and round partner without touching him, or between his legs, coming from behind.
11. Outside files round inside files, or vice versa. Or odd numbered files round even numbered files. The outside files race each other round the head and down the side of their respective inside files and back to their own places.
12. Reversing Files. *Reverse the files—go!* The leaders turn about with a jump and the remainder of their files run and form up again behind them. Files race each other to get formed up.
13. Files counter-running. *Counter-running—go!* The leader of each file wheels right about and leads his file to the end of the gymnasium or playground or to some specified point, where he wheels round again and leads them back, wheeling again at the first point, and so on till the command *Into files—run!*, when all break off and run as hard as they can back to their places.
14. Riders and Horses. The boys of one file run and jump to pick-a-back on the backs of the boys in the next file. Riders and horses change at command, the change being made in various ways, e.g., the riders as soon as they have dismounted turn about and pick up the new riders, or they may drop down and crawl between their horse's legs and stand up.
15. Run, hop, skip or giant stride to touch a wall or two walls and back to places. The whole class can move together, or each file may go to a different wall; they can go with one step and return with another. The distances must not be too great.
16. General race across gymnasium or playground. All run to form a line at a wall; then at command all race across, running, hopping, giant striding, etc.
17. Chasing leaders. *Chase your leaders—go!* The leaders run anywhere and their files try to tag them. At whistle "see which file is first back and formed up."

18. Catching Partners. *Catch your partner—go!* The outside files run to a wall chased by the inside file, who try to tag their partners before they reach the wall. Instead of running the files may “crow hop.” Another method is for all to scatter, and at the whistle each boy from an outside file chases his partner from the inside file (or vice versa) until the whistle sounds again.
19. Jumping the hands. The two boys at the head of each file form the jump by joining hands. The remainder run and jump in their order in the file and race back to their places. The files can be turned with their backs to the jump before the order is given.
20. Running round the hand. Place the fingers of one hand on the ground as a pivot, run round and stand up.
21. Forward roll.
22. Hand-standing.
23. All off the floor. All run and stand on or hang from some apparatus.
24. To the top of the wall bars and back to places.
25. Run up the wall bars, using the bars like the rungs of a ladder, without missing out any with the feet.
26. Hanging from wall bars. Run from files to hang from the top or any named bar with face or back towards the bars.

V. TEAM WORK.

I. GENERAL CONSIDERATIONS.

The method of organising a class in teams which work together under their leaders in many of the exercises and games, and often in competition with other teams, has the following practical advantages :—(i) Greater variety in the work can be obtained by giving the teams different exercises and games ; (ii) the boys by working in smaller groups are able to get more practice in the exercises and to take a more active part in the games ; (iii) much time is saved by setting the teams to work separately at exercises in which only a few boys can take part at once ; (iv) it is often possible to teach some new exercise or game to one or two teams at a time, while the other teams practice what they already know, and in this way to give more attention to the instruction of individuals than is possible when the whole class is taken together ; (v) the permanent grouping makes for quickness, order and efficiency in class formations, and generally for a more flexible and rapid handling of the class ; (vi) the keen rivalry that may be encouraged between the teams adds greatly to the interest of the work and stimulates proficiency.

These are very considerable advantages in the practical conduct of the training, and in themselves justify the use of team work. But

Physical Training through team work is capable of making a real and substantial contribution to the education of the boys as members of society. Not only does it satisfy the instinct for physical activity ; of all the " school subjects " it is the one which furnishes the boys with the most intelligible motive for co-operative and collective effort, and almost of itself brings them to understand that the enjoyment arising from such effort is born of submission to a measure of discipline. It follows that it is incumbent on the master to make the Physical Training on all its sides as enjoyable as possible. Hard and accurate work there must be, but it need not be drudgery, nor will it be if the interest is maintained and the boys' hearts are in it.

This wider aspect of the subject may with advantage be considered a little more closely before passing on to the practical details of team work.

Team work as an instrument of education utilises the gregarious instinct which begins to awaken in children round about the age of ten, and, as adolescence supervenes, develops for good or ill into one of the chief springs of conduct and character. The development of this instinct, no less than the development of the competitive instinct which has equally deep roots in human nature, is of an importance far too great to be left to chance. To regulate these instincts in the interest of wider ends, and to turn them into channels fruitful both to the individual and the community, must be one of those fundamental aims of education on which it is hardly necessary to enlarge.

Team work as employed in Physical Training may be regarded as exemplifying the principles of the " House System," of which the essence is team work operating on a larger scale and in a wider sphere. By means of the House System the boy is led to feel himself a member of a community which, since it is smaller than the school, he can the more easily envisage, and to realise that his conduct and achievements are not matters which concern himself alone. He is brought under the various influences of a corporate spirit which it must be the aim of the masters to preserve in a healthy condition ; and he may likewise imbibe a spirit of emulation which, provided again it is wisely directed, is of undoubted value. Team work in Physical Training in relation to these aims and objects is the House System in miniature, and the advantages of treating team work as an integral and necessary element in Physical Training and games may be strongly emphasised.

The educational value of corporate activity, whether in the affairs of the " House " or of the team, lies in teaching the boys to take responsibility. It is through the power of choice in the affairs of a community, exercised freely by each of its members, that a true and full sense of responsibility is gained ; and it is the virtue of school societies such as these that they give the boys practice in organising themselves under such conditions of free association as are realisable in school. It is by exercising the power to choose

and having to face the consequences, by their successes and failures, that the boys eventually come to realise the conditions which make for a healthy corporate life.

Until boys reach the age of adolescence there can be little or no opportunity for this freer kind of self-directed team work. But team work directed and controlled by the master, yet affording some scope for the exercise of judgment and initiative, has much of value in preparing pre-adolescent boys for the fuller liberty that may be given later on. Such activities can and should teach co-operation, loyalty to one's side, willingness to work under chosen leaders, and the habit of estimating success and failure in action and conduct with reference to the society no less than to the individual. Nor are these younger boys unresponsive to ideals, if presented in a manner which they can understand and appreciate. Their affection for ceremonial actions and the sometimes slavish respect which they pay to laws and conventions of their own making are impulses which a wise teacher will direct into beneficial channels. Moreover their creative instinct, their keen sense of justice, their hatred of pretence and their ability to see through it, are features which can be used to build up an active team spirit and a healthy tone generally.

Though at this early stage a firm general direction must remain in the master's hands, the boys should at the same time be allowed scope for their own initiative. The master will probably select the teams and appoint the leaders, at any rate in the first instance. As, however, the boys' capacity for effective co-operation grows, he will throw upon them an increasing measure of responsibility both in the selection of leaders and in the general activities of the teams. To bring it about that the team leaders should be responsible to, but not a mere agent of, the master, be trusted by the master and the boys alike, and be, in effect, a leader and not a policeman, must be the necessary, if sometimes difficult, objective at which to aim. An equally important aim must be to establish in the boys' minds the essentially reciprocal nature of the obligation existing between the leader and his team, and the conviction that the good behaviour of the team is a collective responsibility shared equally by all its members.

With the adolescent boy the central problem is to determine rightly how much responsibility he may be given. There are obvious limits, and circumstances must decide where these should be drawn. All that can be said is that if the training is to be real and effective the master's active intervention in the permitted sphere of self-direction should be reduced to the minimum consistent with the boys' welfare. The boys will learn nothing unless they are allowed to face and overcome their own difficulties. The team should have the responsibility of choosing its own leader and of replacing him if he is not a success. The growth of self-discipline which is the result of wisely directed team work, is most assured when the rules to be obeyed are self-imposed, and it is a valuable

part of such discipline to learn how to impose these rules as well as to obey them. Experience is needed, and this is not gained without making mistakes. The master will need patience in steering the team past the rocks of inexperience and the shoals of self-complacency which lie in its course.

II. PRACTICAL METHODS.

Number and composition of teams.

Before introducing the team system the master must decide upon the number and the composition of the teams into which the class is to be divided. It is best to have an even number of teams. Eight to ten boys are the best number to form a team. With more than twelve the team becomes unwieldy, with less than six it is too small to form a side for most of the competitive games employed in the gymnastic lesson. Teams should be equalised as far as possible in regard to age and physical ability. Newcomers should be assigned to the teams so as to keep an approximate equality in all respects. Appropriate names should be found for the teams. Numbers do not stir the imagination or help to foster the team spirit. Distinguishing badges or colours are appropriate, and are useful in playing games.

Appointment of Leaders and Vice-Leaders.

A leader and a vice-leader will be required for each team. For the younger teams they should be chosen by the master, or if it is desired to give the boys some share in the selection the best way is for the master to institute a panel of those whom he considers suitable for election, and to let the boys make the final choice from this, and to abide by it. If possible there should be at least twice the number of names on the panel than there are posts to fill, otherwise the boys have little real choice in the matter.

In the adolescent stage the teams should be free to elect whom they please, and should be allowed to stand or fall by their choice. The candidates for election should be proposed and seconded, and it is best to conduct the election by secret ballot, which compels everyone to use his own judgment. The term of office of leaders, vice-leaders and other functionaries should be fixed (a month or half term will probably be found suitable), at the expiration of which fresh elections should be held. Nominations should be unrestricted and outgoing officers should be eligible for re-election. It is a good plan to have as many as possible of the members of the team actively engaged in the "administration," and officers can be appointed for specific duties in connection with the gymnasium and changing room and the assembly and work of the class, as well as for the internal affairs of the team.

Training of Leaders.

The leaders need to be trained for their work, which will be in the first stage to command and handle their teams, and in the second

stage to lead them in games and competitive exercises. The training of younger boys in the management of their teams can, for the most part, be given incidentally and as occasion arises during the work. It is useful, however, to get the leaders together occasionally at other times for a little special coaching ; besides increasing their efficiency this helps to impress upon them the importance of their duties. The master will soon reap the reward for the time so given in the additional value he will be able to obtain from the lessons. Leaders of adolescent teams, who can be given a freer hand and more responsible duties, should receive definite instruction from time to time. When, for example, teams are able to work by themselves on gymnastic apparatus it is essential that the leaders should thoroughly understand the care of the apparatus and how to ensure the safety of those using it, and know how to direct the performance of the exercises. Instruction in these matters may occasionally be given to them during a lesson, the class being used for the purposes of demonstration and practice.

Methods of introducing team work.

Before team work is introduced it is of advantage to tell the boys what it is and how it works, to point out its practical advantages, and to explain what will be expected from the teams and their leaders and other officers. Teams can then be formed and leaders chosen. The teams and their leaders should be given plenty to do from the start, but whatever is done, especially with younger boys, must at first be very simple, and for some time the teams should work wholly under the direct command of the master. The transfer of responsibility should be gradual, and not go beyond the ability of the boys to manage for themselves. It is a good plan to arrange a scheme of team movements and games which places a gradually increasing responsibility upon the teams, and at the same time gives opportunity for the necessary lessons in fair play and the strict observance of rules. Suitable games for this purpose will be found in the Board's "Suggestions with Regard to Games." An example of a graduated scheme of team movements may be given :—

(i) *Practice in assembling quickly in teams.*—Teams to form up in one file in different parts of the gymnasium. At first the leaders serve merely to mark the points at which the teams are to form ; they are given precise directions where they are to go, and may be placed in position before the teams move. Progress is made by giving more exacting orders as to the precise alignment, etc., of the teams, and by requiring the leaders to give some help in straightening the lines, moving the teams slightly forward or backward, etc. For this purpose the leaders need to be taught to give clear and audible directions (they must never be allowed to pull anybody into place), and the best way to do this is to make them stand well away from their teams when giving directions so that they must speak up in order to be heard.

(ii) *Changing team positions.*—The teams when formed up in file change places with each other. The object is to get the teams to move in an orderly manner with the leaders at first at the head of the line and later at the side. Progress is made by requiring the leaders to give such simple directions as *Go! Stop! Change! Follow me!*

(iii) *Changing formations.*—The teams from four open files change to two files, then to two ranks, one ring, two rings, etc. After the class has had some practice in making these changes under the master's directions, the leaders can be called upon to rearrange their teams, e.g., one-half of the team to form a ring, the other half a rank some distance away. An examination of the Order Movements given in the Progressive Lists will suggest a number of other possibilities of training the teams and their leaders in independent manœuvres.

(iv) *Providing apparatus for games and placing gymnastic apparatus in position.*—Supplying and arranging apparatus for games and marking out the ground, arranging the beams, benches, vaulting and jumping apparatus, etc. As this develops, the leaders' directions will gradually replace those of the master.

A scheme of this kind would extend over much more than the preliminary lessons, and the more advanced stages should not be attempted until the boys are quite ready for them and are able to carry out the master's directions quickly and well. If complicated team arrangements needing a comparatively high degree of co-operative efficiency are prematurely attempted, there will be much bungling and waste of time. It should be impressed upon all concerned that team movements must be carried out quickly, in good order, and quietly, the boys running to take their places in new formations, spacing themselves rightly and covering off as quickly as they can, so as to save as much time as possible for the exercises and games.

During this early training, the leaders may be allowed to muster their teams, lead them into formations ordered by the master, see that the boys cover off properly when formed in file (giving the order to cover, and to stand easy after covering), and keep their teams in proper formation at the starting points for exercises such as jumping, balance marching along benches, etc. They may also supervise the placing of gymnastic apparatus and the provision of apparatus for games, and they can keep the score in team competitions.

Later on, leaders and vice-leaders should be informed before the lessons start what apparatus will be needed, where it will be placed, where the different teams will be stationed for separate exercises and games. Thus, for example, when the general order is given for the teams to go to their places for balance marching or vaulting exercises, each leader calls his team to attention and takes it away at the run to the appointed place, where he has the necessary

apparatus set up and then takes up position with his team in file behind him or in rank on his left as may be required. He may then give the commands for each boy or pair to start and the next to make ready. *The first—ready! Go! Next—go!* and so on. Whatever exercise is commanded by the leaders must, of course, be already familiar to the class. Leaders must never be given the responsibility of teaching a new exercise, although they may be allowed to give reminders for faulty execution.

By this time the boys have reached an age when the leaders will be able to take charge of their teams in the games already learnt. A very important phase in the training of leaders and teams is now brought into prominence. Games and team competitions have definite rules which must be strictly obeyed, but are apt to be forgotten or disregarded when excitement runs high. The leaders must take a strong stand against any infraction of the rules and against anything that savours in the least degree of unfair play. If the teams have the right spirit they will look closely to their reputation for sportsmanship and will back their leaders in whatever may be necessary to keep it untarnished.

In order that competition may have social value it needs to have a co-operative basis, and the competing unit should therefore be the team and not the individual. This is the characteristic of organised team games, and the principle can be applied in all other forms of competition, e.g., in athletics, by taking the performance of each participant as a contribution to an aggregate or average of the team. It then becomes of supreme importance to the team that everyone should do his best. The least able is encouraged by the thought that his efforts will be of service to his fellows; the most gifted is conscious of the responsibility for giving of his best for the common good. The quality rather than the actual result of each competitor's efforts will then become the standard of value. Competition on this basis is a powerful means of promoting the team spirit. Interest is maintained and effort stimulated if a record of the points gained by the teams in the various competitions is kept posted up; and all-round athletic ability is encouraged by bringing a variety of activities into account for the order of merit of the teams. The points gained should not be allowed to accumulate over too long a period, or some teams may drop hopelessly behind and become discouraged. It will generally be found desirable to make a fresh start after say a fortnight or a month, though, of course, the numerical position of the teams at the end of each period can be carried forward to a termly or yearly account. It may, perhaps, be permissible to point out that the winning of points must not be allowed to become an obsession. The game's the thing. Points should never be cheaply won or given for things that are not worth while. It is the characteristic of organised team games that they afford an outlet for the competitive spirit, which will be healthy in proportion as it is not over-stimulated, and an opportunity both for correcting the extravagances of individual competition and of subordinating it

to the social spirit. The proper place and value of competition needs, therefore, to be kept in mind.

We come now to the adolescent stage, when it will be found that team work is the key to the amount of work done in the gymnasium. Older boys respond readily to methods which make for increased activity, variety and self-direction. They value opportunities for testing their strength and skill to the full, whether on the playing-field or in the gymnasium. Their leaders by this time will be rapidly acquiring a considerable degree of proficiency in the performance of the exercises, in which they will be able to assist the members of their teams to an appreciable extent. Authority may now be increasingly delegated, until with the older boys the leaders for the greater part of the lessons will be conducting the practice of apparatus exercises while the master supervises, or, perhaps, teaches some new exercise to one or two of the teams. Where there is sufficient apparatus it will be found that occasional competitions, judged by the master, are useful as a means not only of stimulating keenness, but of imparting instruction and of securing perfection of form. For example, competitions can be held in balance and heaving exercises, one or two members of each team carrying out the exercise at the same time ; or each team in turn and as a whole may perform an exercise on the wall bars ; or in jumping and vaulting exercises where there are available, for example, two sections of beams, four beam saddles, etc. Not more than one such event should take place in any lesson. In these competitions it is often possible to allow the leaders to give the commands and make corrections, and their proficiency in these respects may be brought into account in the competition.

General Arrangements.

(a) When the class is fallen in for free-standing exercises each team can conveniently form a separate file. The leaders should stand at the head of their files, and the remainder of the boys in each file should be arranged according to height ; the shortest being next to the leader. This arrangement places the leader in a position from which he can manœuvre his team quickly when teams are dispersed for exercises or games ; he is also able to look to the covering of his file, and in performing the exercises he can set an example for those behind him. The sizing of the remainder allows the master to obtain the best view of the class and the teams the best view of their leaders. The boys should remember their places and fall in always in the same order ; much loss of time and confusion is avoided in this way.

(b) Time is saved by assigning to each team a definite part of the gymnasium for separate games. When the general order is given to disperse for games, the teams proceed at once to their allotted places without further directions. The arrangement can, of course, be varied when required for general games or other purposes.

(c) Time is saved and good order and efficiency are promoted by assigning to each team a particular beam, bench and set of wall bars. Practice should be given in providing and setting up and in clearing away the apparatus. This should be done with care and without hurry, but without waste of time. Safety to the pupils and avoidance of damage to the apparatus, combined with reasonable quickness and quietness should be the aim. When a team forms up in line before an apparatus the leader should be on the right. He should be the first to perform any exercise that is taken individually, and after completing it should supervise the remainder, unless the exercise is one in which the team can follow their leader immediately, in which case he will tell them to follow him.

VI. EXAMPLES OF TABLE CONSTRUCTION.

PART I, SECTION I, OF THE TABLE.

Example of the arrangement and linking of the exercises in Part I, Section I, of a Table, and the development of the exercises during six lessons given to the Table.

Notes.

- (1) In all the six lessons the exercises are taken in the order given.
- (2) The lesson in which each development of an exercise (if any) takes place is indicated.
- (3) Exercises B to H are linked and the work goes straight on without a pause. It will be seen that in most cases the last command in an exercise prepares the starting position for the next exercise.

A. Teams follow-my-leader at full speed, running, hopping, running on "all fours," running with sudden jumps, etc.; the action being varied at each lesson.

The class falls in. *Fall—in! Cover!*

B. (St.) Hd. drop. f. and stretch. u.

Head forward—drop! Upward—stretch! Repeat—one! two! etc. Hands on—hips! Heels—raise!

C. (St.—Hl.—Ra.—Hn.—Hp.) Asd. jump.

Astride jumping—begin! .one! two! one! Stop! (with the feet together).

2nd lesson :—

Astride jumping—begin! .one! two! Stop! (with feet apart).

D. (St.—Hl.—Ra.—U.—Bd.) Quick Kn. bend. with Am. stretch. s. (T.C.).

Quick knee bending with arm stretching sideways—one! two! etc. Heels—lower! Feet astride and hands on thighs—place!

2nd lesson—

(St.—Asd.—Hl.—Ra.—U.—Bd.) Slow Kn. bend. with Am. stretch. s.

Knees bend and arms sideways—stretch! Knees stretch and arms—bend! Repeat by numbers—one! two! etc. Heels lower and hands on thighs—place!

3rd lesson :—

(St.—Asd.—Hl.Ra.—U.Bd.) Quick Kn. bend. with Am. stretch. s.
(T.C., rhyth.).

*Quick knee bending with arm stretching sideways—begin ! one !
two ! etc. Stop ! Heels lower and hands on thighs—place !*

5th lesson :—Same as 3rd and 4th lessons but with C.C.

*Quick knee bending with arm stretching sideways, counting aloud
for yourselves—begin ! Stop ! Heels lower and hands on
thighs—place !*

E (St.—Asd.—Hn.Th.) Hd. press. b.

*Head pressing backward—one ! two ! etc. with loose arms,
trunk forward—bend !*

2nd lesson :—

(St.—Asd.—Hn.Th.) Rhyth. Hd. press. b.

*Head pressing backward—begin ! Stop ! With loose arms, trunk
forward—bend !*

F. (St.—Asd.—Am.D.—Tr.F.) Rhyth. Am. swing. to F. Bd. and s.

*Arm swinging in front and sideways—begin ! Stop ! With feet
together, crouch—down !*

2nd lesson :—The movements in Lesson 1 to be followed by
Rhyth. Tr. press. d. to touch floor between legs.

*Arm swinging in front and sideways—begin ! Stop ! Pressing
down to touch floor between legs—begin ! Stop ! With feet
together, crouch—down !*

4th lesson :—The movements in Lessons 2 and 3 to be followed by
Hn. clasp behind back and Tr. stretch. f.

*Arm swinging—begin ! Stop ! Pressing down
—begin ! Stop ! Hands behind back—clasp ! Trunk forward
—stretch ! Downward—bend ! Repeat—one ! two ! etc.
With feet together, crouch—down !*

G. (St.—Crh.) Alt. Lg. stretch. s., chang. Ft. in one move. (free).

*Alternate leg stretching sideways, begin with the left—go ! Stop !
Lie on the back—down !*

2nd lesson :—

(St.—Crh.) 2 Lg. stretch. s.

*Both legs stretching sideways—one ! two ! etc. Lie on the back
—down !*

4th lesson :—The same as in 2nd and 3rd Lessons but rhythmically

*Both legs stretching sideways—begin ! Stop ! Lie on the back
—down !*

H. (Bk.Ly.) Breathing.

Deep, slow breathing—begin ! Rest ! On the feet—up !

J. U. jump, and One step and F. jump.

PART I, SECTION 2, OF THE TABLE.

Examples of the Arrangement of Exercises in Part I, Section 2,
of a Table.

(1) EXERCISES OF SECTION 2 FOR A CLASS OF ABOUT 32 BOYS OF
11 to 12 YEARS OF AGE.

<i>Dorsal.</i>	(Bk.Lg.-U.Gr.) Span. (Wall bars).
<i>Heaving (I).</i>	(Hi. St.-Kn. Fl. Bd.-U.Gr.) Heav. with Kn. stretch (first with both feet supporting, later with one). (Wall bars).
<i>Agility.*</i>	Hand-standing (::). (Wall bars).
<i>Break.</i>	Run up wall bars, using all the rungs below the gap.
<i>Balance.</i>	Bal. March f., turn 90° and jump down. (Bench). Crow Hop back to place in team.
<i>Jump.*</i>	St. Hi. jump over bench. (Bench first with balance-rib upward).
<i>Abdominal.</i>	(Hi.Fr.Sup.) Am. bend. (Bench).
<i>Lateral.</i>	(Sd.St.-Ft.Rst.) Tr. bend. s. to grasp raised ankle (Bench).
<i>Abdominal : Break.</i>	Rabbit Hop between two parallel benches.
<i>Marching.</i>	March with turn about in four moves.
<i>Running.</i>	Inter-team race.
<i>Heaving (II).</i>	(Hg.-Or.Gr.) Am.walk.s.withLg.swing.(Beam).
<i>Intro. Vault.*</i>	(St.-F.Gr.) Vault to Bal. Sup. (Beam, first at hip height and gradually raised to chest height).

Notes on the Arrangement of the Work.

The exercises marked (*) are borrowed from those belonging to Part II of the Table.

Apparatus employed :—Four benches, two beams, and sufficient wall bars for all the class at the same time.

The teacher takes the whole class at the same time for the Dorsal exercise and the first Heaving exercise.

The boys are in groups of three for the Agility exercise.

The Balance exercise is taken in teams, one at each bench.

The Abdominal and Lateral exercises are taken by the whole class at the same time, one team at each bench.

The Abdominal Break is taken in stream, two teams to each pair of benches.

In the second Heaving exercise two teams are at each beam ; the boys of one team start from one end of the beam, go to the centre and return to the same end ; the boys of the other team start at the centre, go to the other end of the beam and return to the centre.

In the Vaulting exercise each team has a beam to itself, and works on both sides of it.

If there are only sufficient wall bars for half the class, the following modifications would be made :—

(a) Two teams carry out Exercises 1, 2 and 3, while the other two teams do the Balance exercise ; the teams then change places.

(b) The Break is taken after the whole class has completed these exercises, but by only one team at a time.

Notes on the Development of the Exercises while the Table is in use.

Dorsal.	No development.
Heaving (I).	In the first and second lessons with both feet resting on the wall bars, from the third to the sixth lesson with only one foot on the bars.
Agility.	This will not be taken until the third lesson.
Break.	Run up and down only a few steps at first.
Balance.	In the first and second lessons, instead of the march along the bar, four boys at a time will stand on the bar, turn 90°, and jump down, and repeat, turning the other way. In the third and fourth lessons, the boys will march only half way along the bench (two boys at same time, one starting at the end of the bar the other from the middle). In the last two lessons the boys will march the full length.
Jumping.	This will not be taken until the third lesson.
Abdominal.	In the first lesson, practice taking the starting position only.
Lateral.	No change, except to repeat the movements a larger number of times.
Abdominal Break.	No development.
Marching.	This, a new exercise, will not be taken until the second lesson. Some familiar march should be taken in the first lesson.
Running.	To be varied at every other lesson.
Heaving (II).	This will be taken up in the second lesson ; in the first lesson it will be prepared for by (Hg.-Or. Gr.) Lg. swing, with alt. Hn. lift. (already taught), three boys working on a beam at the same time.
Vaulting.	Gradually raise the height of the beam.

(2) EXERCISES OF SECTION 2 FOR A CLASS OF ABOUT 32 BOYS OF
14 TO 15 YEARS OF AGE.

Dorsal. (Bk.Ly.-Am.M.) Span., followed by :—
(St.-Wd.Asd.-Nk.Gr.-Tr.D.) Rhyth. Tr. press. d.

Balance (I). (St.-Nk.Rst.) Kn. rais.

Heaving.

- 1 { (F.Hg.) Heav. (:). (Wall bars).
Monkey jump up wall bars.
- 2 { (B.Hg.) Chang. between B. Hg. and F. Hg. (Beam).
(St.-Ft.F.-Ur.Hv.Gr.) Circl. u. and d. 3 times. (Beam)
- 3 { Climbing 1 rope.
Head-spring and High jump while waiting turns at ropes.

Marching. Hop march with Hi. Kn. rais. ; followed by Gal-
loping s. in double circle.

Balance (II). (Hi.Cn.) March. f. with Kn. rais. and stretch. f. in
pairs. (2 benches) ; followed by Hopping wrestle
in pairs. (Competition between teams),

Abdominal. (Hg.-Bk.Rst.-Kn.Ra.) Kn part. (Wall bars and
beams.)

Lateral. (Fr.St.-Crh.-1F.Gr.) Taking Sd. Sup. posn. (Wall bars
and beam.) (Later, Lg. rais. s.).

Notes on the Arrangement of the Work.

Apparatus available : 10 sections of wall bars, 2 benches, 1
single-span beam, 4 ropes, vaulting box, jumping stand. With so
limited an equipment of apparatus much team work is necessary.

The class work as a whole under the teacher until the Heaving
exercise is reached.

For the Heaving exercises, two teams go to the wall bars and
take the exercises in Group 1 (which are new) under the teacher,
one team under its leader goes to the beam for the exercises in
Group 2, one team under its leader goes to the ropes. The teams
under the teacher at one lesson will change places with the other
teams at the next lesson.

The marching, which is a class exercise, is put in between two
spells of team work.

Two teams are taken by the teacher for the Abdominal and
Lateral exercises, while the other two teams carry out the second
Balance exercise under their leaders. Both the wall bars and the
beam (both sides) will be needed to accommodate the two teams at
once in the Abdominal and Lateral exercises. The boys using the
beam can stand on the floor in the starting position, grasping the
upper beam and with the lower part of the back against the lower
beam. The beam might be left in place after the Heaving exercise,

ready for the Abdominal exercise, though pushed up above head height so that the class can march under it. This will save time. The Lateral exercise can be taken at the beam by grasping the lower beam with one hand and placing the other hand on the floor, as at the wall bars.

Notes on the Development of the Exercises while the Table is in use.

- | | |
|------------------------|--|
| Dorsal. | This exercise might be prepared for in the first and second lessons by taking it with the arms in the Ac. Bd. posn. in the first and in the Am. S. posn. in the second (both positions used before), and then with Am. M. in the third and subsequent lessons. |
| Balance (I) | Omitted until the third or fourth lesson. |
| Heaving. | No development. |
| Marching. | After the third lesson, take the Hop march in two files holding hands. |
| Abdominal and Lateral. | For the first two lessons, each pair of teams will take either the balance exercise, or the abdominal and lateral exercises. At the third lesson there should be time to change the teams round so that each team takes all three exercises. |

(3) EXERCISES OF SECTION 2 FOR BOYS OF 17 TO 18 YEARS OF AGE :—

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|---------------------|---|
| <i>Dorsal.</i> | (a) (Bk.Ly.—Kn.Ra.—U.Gr.) Span (:). (Later, without assistance.) (Wall bars).
(b) (Bk.Ly.—Hi.Lg.Ra.—Fxd.—U.Gr.) Kn. stretch. (Wall bars).
(c) (Hi.St.—Hv.Gr.) Alt. Hn. shift. d. and u. with legs straight. (Wall bars).
(d) (Fr.St.—Tr.D.—B.Gr.) Lg. rais. to Rvs. Hg. posn. (Wall bars). |
| <i>Abdominal.</i> | (a) (Hg.Bk.Rst.—Lg.Ra.) Lg. part. (Wall bars).
(b) (Hi.Sd.St.) D. jump s. (Wall bars). |
| <i>Heaving (I).</i> | (a) (Hv.Hg.—In.Gr.) Am. walk f. (Adjustable ladder).
(b) Ladder climb. and descend. with hands only. (Rope ladders).
(c) Climb. diag. u. along a line of ropes.
(d) (Sit.) Diag. twist. u. Hd. leading, and d. Hd. leading. (Window ladder). |
| <i>Balance (I).</i> | Bal. march with 1 Kn. full bend., 1 Lg. rais. f., and Am. rais. f. (Beam at head height). |

<i>Marching.</i>	Various. Run for $1\frac{1}{2}$ minutes.
<i>Vaulting.</i>	Run up sloping bench and (Hi.St.) D. jump over rope. (Beam at knee height.) Run. Hi. jump over beam (below hip height). Run. Thro. vault with 1 leg leading. (Beam saddles). Run. Heav. vault. (2 beams.)
<i>Lateral</i>	Preparatory exercise for Sideways holding. (Beams at head and knee heights.)
<i>Heaving (II) and Balance (II).</i>	Bal. march. f. up sloping bench-rib; circl. u. to Bal. Sup.; turn outside hands to Hi. Sit.; circl. d. to Rvs. Hg., and back to Hi. Sit.; turn outside hands to Bal. Sup.; lower through Hv. Hg. to stand on bench-rib; Bal. march down sloping bench. (One beam at knee height with ends of benches, ribs up, resting on it, the other beam at chin height above bench ribs).
<i>Agility.</i>	Roll backward to Hn. St. posn.

Notes on Arrangement of Work.

Apparatus.—Full equipment.

Dorsal.—Exercise (a) is taken by half the class, assisted by the other half; the half that has done (a) will then do (b) and the remainder (c). The two half classes then change places and repeat. At the fourth lesson, when assistance is not given in (a), the whole class together will do (a), (b) and (d).

Abdominal.—The whole class together do (a) and (b).

Heaving (I) and Balance (I).—The boys will disperse in their teams for these exercises, each boy in turn taking the Heaving and the Balance exercises in sequence. Each team goes to the same heaving apparatus for the first three lessons, and to a different apparatus in each of the subsequent lessons. Each team will require a beam for the Balance exercise, so that all the beams will need to be set up.

The marching and running should be arranged so as not to be interfered with by the beams, which are left standing for the Vaulting exercise.

Vaulting.—The four beams will be prepared for these four exercises. The class starts at one end, the first four boys taking the first exercise on the first beam together, then the second exercise on the second beam while the next four boys take the first exercise, and so on until the whole class has passed round the beams and re-formed. In the first two lessons the exercises should be carried out by commands, the boys stopping after each vault for the word "Go"; in the subsequent lessons the exercises go in stream, each

set of four boys keeping together. The inclusion of these vaulting exercises is an illustration of the permissible transference of exercises from one part of the table to another.

Lateral.—The teams work in pairs, one team on each side of a beam.

Heaving (II) and Balance (II).—This is a combination exercise, beginning with a balance march, going on to a series of heaving movements in which balance is important, and ending with another balance march. Each team works at a separate beam with two benches, and a mat for the following Agility exercise.

Agility.—Each boy after finishing the preceding exercise, carries out the Agility exercise before returning to his place in the team.

Notes on the Development of the Exercises.

Dorsal.	In the 4th and subsequent lessons (<i>a</i>) is taken without assistance (:). Two shifts at this exercise are thus avoided, and time can now be found for (<i>d</i>), which comes in at this point.
Abdominal.	As preparations for (<i>a</i>), at the first lesson take (St.-Bk.Rst.) Lg. rais., part., clos. and lower, the boys taking their own time ; at the second lesson take the same exercise from the Hg.-Bk. Rst. position, and if this goes well proceed to (<i>a</i>) in the third lesson. At the first lesson take (<i>b</i>) from a position low down on the bars.
Heaving (I).	See notes on arrangement of the work for the change introduced in the fourth and subsequent lessons.
Balance (I).	At the first lessons the knee will be bent only half way and the arms raised sideways instead of forward. At the second lesson the arms will be raised forward. At the third lesson the knee will be fully bent.
Marching.	Vary the marching exercises. Run for 1 minute at the first lesson, $1\frac{1}{4}$ minutes at the second, and $1\frac{1}{2}$ minutes at the third lesson.
Lateral.	During the first three lessons take Bal. Sup. posn. on upper beam, then take hold of both beams as for Gate vault and lower through Sideways-holding position without stopping in it. In the subsequent lessons, stand on the ground and grasp both beams as for Gate vault and throw the body up and over the upper beam to Bal. Sup. position through the Sideways-holding position.

Heaving (II) This long exercise, composed entirely of well-known elements, will not be introduced until the boys have got thoroughly into the way of the Table, when there should be time for it, say, in the fourth or fifth lesson.

and Balance (II).

An obstacle race over the beams could be introduced at this point in the sixth lesson, arranged in one of the following ways :—

(1) Circle up and over a beam at chest height.

(2) Run up sloping bench, hooked on beam at knee height, and jump down.

(3) Wriggle through beam saddles reversed on the floor and held in position by a beam fixed down on them.

(4) Make a figure of 8 round two beams set respectively at a little below hip height and at stretch height ; pass under the lower beam, back between the beams, over the top beam, back again between the beams and under the lower beam again to the finishing point. Use the quickest means of making the figure, circling, scrambling, etc.

The race could also be arranged to include all these in a circular course.

PART II OF THE TABLE.

METHODS OF ARRANGING THE LEAPING EXERCISES IN PART II OF THE TABLE.

Conditions and possibilities vary so greatly that it is impossible to give specimen arrangements of the Leaping exercises to suit all schools. We must be content, therefore, with a discussion of two important considerations which affect this arrangement, namely, the age of the pupils and the amount of apparatus available.

The chief factor in regard to age is whether the team leaders may be made responsible for looking after the safety of their teams in performing these exercises. They should never, of course, be given this responsibility except in regard to exercises, suitable to their age, which have been taught by and under the direct supervision of the teacher, and have become thoroughly familiar to the boys. And they must have had a proper training as leaders and in the methods of preventing accidental falls. If these essential conditions are fulfilled, there is no reason why the leaders should not take on this duty at about the age of 13. Further reference to this subject will be found in the chapter on team work.

With regard to the apparatus, two contrasted conditions will be discussed, namely, the arrangement that may be adopted with a full equipment of apparatus, and that which is possible when the equipment is of the scantiest. By a full equipment is meant that

which includes all the apparatus required for carrying out the exercises given in the Progressive Lists, and in sufficient quantity to permit of class work. In discussing the possibilities with a scanty equipment, it will be assumed that there are available one vaulting horse or box, four benches, one jumping stand and one mat.

Taking these two conditions together, it is proposed to describe arrangements of the kind that may be employed with boys of 9 to 13 and of 13 to 18 years of age, and in each case to consider what may be done with the full and the scanty equipments mentioned above.

Case 1. Age-group 9 to 13. Scanty Equipment of Apparatus.

During these years many rhythmical and introductory jumping exercises are available, and as these exercises require no apparatus they can for the most part be taken by the whole class at the same time, and frequently find a place in Part I of the Table, especially in Section 1.

It is at this age that the proper employment of the natural spring and flexibility in jumping and landing can be most successfully taught (power will be developed later), and lack of variety of vaulting apparatus is not a serious hindrance to progress. One or two pieces will suffice for the purpose.

During the first three years the boys must work directly under the teacher's command in all the exercises. In those which cannot be taken by the whole class at the same time, e.g. High jump, Long jump and Downward jump, arrangements should be made—as far as this is practicable—for at least four boys to start together at the word *Go!* It is not usually difficult to devise ways and means of doing this with a limited supply of apparatus; here are some, and others will suggest themselves:—(1) With one jumping stand, a second span of rope can be formed by placing an additional rope over the pin of one of the standards and holding the other end; a third span can be obtained by leading another rope from the other standard over a wall bar, where it is retained by its weighted end (it must not be tied to the bar); (2) two different jumps, e.g., a high jump and a long jump, can be arranged alongside of each other, and one-half of the class told off to each. Six to eight boys might then jump at a time. Having completed the exercises, the half-classes can change places; this introduces variety. (3) Two teams can be set to perform a Face vault on sloping benches, a bench being provided for each team, while the other two teams carry out an Astride vault on to the horse. Those doing the Face vault will land first on one side and then repeat the exercise landing on the other side; this repetition will equalise the time taken over the two exercises. The boys doing the Astride vault can be given a second exercise, such as Leap Frog or an Agility exercise, on their way back from the vault. All the boys will be working under the direct command of the teacher, three boys coming out for the exercises at the teacher's

order. The teacher will stand at the apparatus where his help is needed, probably for the exercise which is least well known to the boys.

If it is not possible to take all the Leaping exercises down the length of the gymnasium, one should be arranged across the gymnasium in a place where it can be easily supervised.

In the fourth year, with boys of twelve, and perhaps towards the end of the third year, it should be possible to give the leaders charge of their teams at all well-known jumps and vaults, where a saving hand is not required. They can give the command *Go!* and see to the formation of their teams.

Case 2. Age-group of 9 to 13. Full Equipment of Apparatus.

The principle of giving occupation to as many boys as possible at the same time is much more easily applied than in the preceding case; it is equally valid.

The advantage of having a greater variety of apparatus is felt in the first two years. With eight ropes it is possible for at least four boys to carry out the Heaving vaults at the same time; as many boys as there are benches can take the Face vault together; the horse, the box and the buck can be brought into simultaneous use for the elementary *Astride* vaults.

But the advantages are most pronounced in the third and fourth years, when the variety of apparatus opens the way to a large range of exercises. It will often be possible to have four boys at once performing the same exercise, e.g., Downward jump (Benches on beams), or Through vault (Beams with saddles), or (Sd.St.) Face vault (Benches or beam), or Gate vault (Beams), etc. This implies team work but permits of easy supervision and control by the teacher.

Early in this stage it will be well to begin to teach the boys how to stand at the apparatus in readiness to save each other from falls in the different kinds of vaults, and to get them into the habit of standing ready for the next performer after taking their turn at a vault. They should not be allowed to assist a performer in carrying out the exercise, and there is little likelihood of their services being required at this early stage, but the habit of looking after each other is formed.

The important Introductory vaults on the beam should be frequently used, as their thorough practice ensures confidence, safety and good style in the more difficult vaults later on. They can sometimes be taken by as many as eight boys at a time on a single beam, the boys being placed alternately on opposite sides of the apparatus; their performance, therefore, takes up very little time. When the Table includes vaults of this and other kinds in which the beam is used, it often saves time to take them after the exercises of Part I, Section 2, in which the beams are used, reserving the remainder of the Leaping exercises for Part II of the Table.

In the fourth year (boys of 12 to 13) the following procedure will generally be found to work well. When teaching a new vault in which some assistance to the performer may be required, the teacher should take one team at a time in this exercise, and let the leaders of the other teams take their boys at jumps and vaults that they know. After the new exercise has been learnt by all, the teacher can take the whole class in it, the boys working in fours (or half the class if the box and horse are used, the boys working in twos). Finally, the leaders can be given charge of their teams in this vault. The security and style of the performance will determine when each step should be taken.

The apparatus can be arranged for a series of vaults and jumps taken consecutively round the gymnasium. The four team leaders begin by taking the first vault, the next four boys then make ready for the first vault and the four leaders for the second ; when these go the next four boys make ready and so on. If one double-span beam is set up across the centre of the gymnasium, with four saddles on one span and four benches hooked up on the other, and a jumping stand is placed at one end of the gymnasium and a long jump marked out at the other, the following exercises can be taken in succession :—Running Through vault on saddle, running high jump, run up benches and Down jump with one hand grasping the beam, standing long jump. When the leaders have reached the last jump, sixteen boys will be in motion at the same time.

Obstacle Races.

Some remarks on obstacle races that can be arranged in the gymnasium will not be out of place here, because jumping and vaulting enter into them to a large extent, and they encourage the spirit of daring so necessary in these forms of athletic gymnastics. With a poor supply of apparatus there is not a great deal of scope for variety in these races, but the boys can crawl through a bench, vault from side to side of it a specified number of times, run along its top, jump over it at right angles (with or without placing a foot on the top), or from side to side. The jumping stand can be used for high jump, and the remainder of the course completed with "stepping stones," striding over marks, hopping, skipping, running in various ways on hands and feet, etc.

With a full equipment of apparatus it is easy to organise a great variety of obstacle races over straight (there and back) or circular courses. In the latter case the boy who runs nearest to the wall down one side of the gymnasium should take the inside place when coming up the other side.

Quite simple races can be arranged for the youngest boys ; a single obstacle to be negotiated twice, going and returning, is quite sufficient. Obstacles should not be included in relay races until the third year (boys of 11 to 12).

Case 3. Age-group 13 to 18. Scanty Equipment of Apparatus.

With little apparatus, the jumping exercises will necessarily take the chief place. Fortunately, there is a large number of these not employed in the earlier training, and many of those that have been included are still of use.

The teacher's chief concern is still to find occupation for as many boys as possible at the same time. With only one vaulting box (or preferably a horse), it is possible to teach a considerable variety of vaulting exercises, and the teacher will probably give most of his attention to this, relying on his ingenuity in arranging other Leaping exercises, Agility exercises and competitions (which may be included fairly frequently) to hold the interest of the boys who are not performing at the box or horse. He will find the team system an invaluable means of securing effective work. Class work, however, as described in Case 1, should occasionally be employed.

With boys of 15 years of age and over it is possible to use two or three of them, packed together, in place of a vaulting buck. This arrangement gives a much more stable support than the "back" presented by a single boy.

Case 4. Age group 13 to 18. Full equipment of apparatus.

Much that has been said with regard to the fourth year (boys of 12 to 13) in Case 2 is applicable here, but it should be possible to give these older boys full responsibility for ensuring each other's safety in most of the vaulting exercises, and this allows the teacher to teach a new vault to all four teams at once, the four leaders standing ready for the boys of their teams. The teacher can always place himself near a team in which he knows that a particular boy needs his special assistance or the confidence which his proximity gives.

Greater use can be made of consecutive vaults and jumps arranged round the gymnasium than is possible with younger boys (see Case 2). When necessary, the boys who have just vaulted can remain by the apparatus to safeguard those who follow before passing on to the next vault. The horse, the box and the buck can be placed in a line at one point of the course, and the same or a different vault may be taken on each. If the boys are moving in fours it will be convenient to place a mat for an agility exercise in line with these three pieces of apparatus, so that all four boys may have something to do at this point. Similarly, the box and the horse for two of the boys can be arranged in line with a jumping stand for the other two ; or at the command *Go !* the boys can follow each other quickly in an *Astride* vault over a single piece of apparatus.

Another way of working the whole class under the teacher's direct command is to have one span of beams set up and two pieces of jumping or vaulting apparatus placed between the uprights of the other span, and to station the teams at the apparatus for different exercises, e.g. *Thro. vault* (beam saddle) on one side of the

beams, Heav vault (2 beams) on the other side, Asd. vault (horse lengthw.), and Face vault (box). The teams can change round, so that each carries out all the exercises. The arrangement suggested keeps the apparatus in line and makes supervision easy ; with older boys this is not so necessary.

With good team work and leaders well trained in looking after the safety of their teams, a large number of different vaulting exercises can be taken by the whole class in relatively a short time. The work, of course, needs to be carefully planned and the placing and clearing away of the apparatus arranged so as to economise time.

An adequate equipment of apparatus permits of so many vaults being taken by four boys at a time that it is easy to create a competitive interest among the teams by including a boy from each in each four. The teacher can declare the best performer in each set, or announce the winning team after all have completed the vault.

Most of the Leaping exercises can be made competitive. For example, a set of four can be arranged each as a separate " event " to be taken in rotation by the four teams ; or they can be incorporated in a programme of " Potted Sports." Standards of performance can be set to assist the leaders in awarding points to their teams. These standards may be set by the teacher or by a committee composed of the leaders or other representatives of the teams, and can be regulated by the height of the apparatus, the distance from the apparatus at which the spring or landing is to occur, etc.

As the boys grow older, obstacle races can be made real tests of agility and endurance, and most of the apparatus can be brought into use at one time or another. To guard against accidents, it is necessary to lay down strict rules, infringement of which disqualifies the team. For example : A beam must be vaulted and not jumped ; a Downward jump from any considerable height must be taken with one hand grasping the beam ; in descending a rope, rope ladder, or window ladder, the feet must touch the ground before the hands release their grasp. It is for the more daring boys that these safeguards are most necessary.

EXAMPLE OF A COMPLETE TABLE FOR A CLASS OF ABOUT 32 BOYS OF 9 TO 10 YEARS OF AGE.

Apparatus required : 16 sections of wall bars, 4 benches, 2 or 4 beams.

Part I.

Section 1.

Racing to places in open files, run to corners and form rings, to places at wall bars, etc., and back to open files.

(St.) Skip jump ; at whistle jump to Crh. posn., then change to hands on knees.

(St.-Hn. Th.) Hd. press. b.
(St.) Hl. rais. (C.C. to 10).
(St.-Rvs. Am. D.) Am. bend. u.
(St.-Am.F.) Am. swing. b. and f.
(Bk.Ly.-Kn.Ra.) Thunder.
(St.-Asd.) Quick Tr. bend. d. to touch opp foot.

Section 2.

(Pn.Ly.) Hd. press. b.
(Hz.Sit.-Kn.Ra.Op.-Kn.Gr.) Tr. bend. d.
(Hi.St.-Hv.Gr.) Alt. Hn. shift. d. and u. (legs straight). (Wall bars.)
(Hi.St.-Hv.Gr.) Hz. climb., free form. (Wall bars.) [Added later, if there is time.]
Cat crawl. (Bench.)
(Bt.Fr.Sup.) 1. Hn. touch. knee, head, etc.
Tug-of-war with one hand, pull to wall.
Marching with instant halt on signal, rapid marching, giant, strides.

Part II.

(St.-F.Gr.) Free U. jump, landing with knees fully bent. (Beam or wall bars.)
(St.-F.Gr.) Vault to Bal. Sup. (Beam.)
Race over and under beams and along benches.
Game, e.g. Tower Ball, or Dodge Ball.
Breathing.

Notes on Table for boys of 9 to 10 years of age.

Section 1.—The first exercise, racing to places in open files, etc., gives practice in rapidly forming up in different ways and in different parts of the gymnasium. The run from one position to another can be varied, e.g. with long strides or very short steps, with knee raising ("prancing like a horse"), "like a wooden man," etc.

The exercise (St.-Rvs.Am.D.) Am. bend. u. is known to the boys and should be used only a few times as a reminder and a corrective.

The last two exercises in this section, with abdominal and lateral effects, can be omitted when the exercises in Section 2 with similar effects are first taken, but it should be possible to include all these exercises later.

Section 2.—After the Head pressing backward, place the hands on the floor and run the legs through them until sitting ready for the next exercise.

After the second exercise, two teams remain sitting but turn to face the wall bars and watch what is being taught and done, the other two go to the wall bars for the third (heaving) exercise, and having completed it get the benches ready for the balance exercise, while the other two teams do the heaving exercise.

Each team has its own bench for the Cat crawl, and a competitive interest can be introduced by judging the best of each four boys.

Later on, when the boys have got well used to the Table, time may be available for a second heaving exercise, taken immediately after the first as indicated in the table. For this second exercise each team will be allotted a certain number of sections of wall bars, and will sit down behind the leading boy facing the right or left-hand section. Then the first four boys come out at the teacher's command, carry out the exercises, and go to the benches (which have been placed so that the teacher can supervise both exercises) and carry out the Cat crawl ; and so on.

The Tug-of-War can be taken either by two teams at a time or by the whole class formed in two files.

For the jumping and vaulting exercises the boys form up, one team to a beam, on both sides of the beams, those in one line facing intervals in the other. If there is not room at the beams for all at the same time in the jumping exercise, some can use the wall bars.

For the obstacle race, the teams form up facing the beams, which are placed between hip and knee height ; a bench is placed opposite to each team on the other side of the beams. The race may be as follows : get over the beam, run along the top of the bench, touch the end wall of the gymnasium, run back along the bench and under the beam, and finish by sitting down in the team order. Many kinds of courses can be devised, but no obstacle race at this age should be run as a relay race.

The apparatus is now put away, as it is not used again during the lesson.

TWO CONSECUTIVE TABLES FOR A CLASS OF BOYS OF 15 TO 16 YEARS OF AGE.

Table A.

Part I.

Section 1.

Racing the whistle.

(St.) Toe plac. s. with Am. rais. s. (s. and u.).

(St.-Hn.Th.) Hd. press. b.

(St.-Am.F.) Am. swing. u. and f.

(St.-Wd.Asd.-Ac.Bd.Clp.) Quick rhyth. Tr. turn. from s. to s. with El. swing.

(St.-Toe S.) Hop with Ft. chang.

(St.) Ft. plac. s., and Hl. rais. and Kn. bend. with Am. stretch. u. and part.

(St.-Asd.-Am.U.-Tr.F.) Am. swing. d. and b., f. and u.

Section 2.

Rapid rope climbing, to develop into a race (two from a team at same time).

(Bal.St.) Lg. carry. s. and b. (later with Am.rais.s. and u.). (Bench).

Run. up sloping bench, and vault off to r. or l. (Benches on wall bars).

(Fr.Sup.-Asd.) Plac. one Hn. on hip. (later one Am. rais.u.).

March and halt with turn about.

Running and striding over obstacles (Benches).

Part II.

Run. Hi. jump (straight run).	} By teams. The first team at each jump or vault to set a standard for all. Those who reach the standard score for their teams in the respective events.
Run. Asd. vault. (Buck).	
Three consecutive Long jumps.	
Run. Heav. vault. (2 ropes and beam).	

Followed by :—

Agility practices—

Head Spring over pad.

Walk on hands.

(Hi.Bk.Ly.) Swing. down through Hn. St. posn. (Beams with saddles).

(St.) Handspring from low box.

Or :—

Class boxing.

Table B.

Part I.

Section 1.

Hanging catch game. (All hanging apparatus ready).

Class in open files : files changing places by side steps.

(St.) Quick Hd. turn. from s. to s.

(St.-Asd.-Hl.Ra.-Nk.Rst.) 1 Kn. bend. [1st and 2nd lessons].

(St.-Hn.Hp.) Rhyth. Ft. plac. wide s. [3rd lesson].

(St.-Asd.-F.Bd.) Rhyth. El. and Am. swing. s. [1st and 2nd lessons.]

(St.-Wd.Asd.-Am.D.-Tr.F.) Rhyth. El. and Am. swing. s. from F. Bd. [3rd lesson].

Forward roll to Crh. posn.

(St.-Crh.) 2 Lg. stretch. s.

(St.-LowHn.Hp.) Tr. lower. s. with Lg. rais.

Three steps and F. jump, and on landing jump off both feet.

Two figures or phases of a Jig, Reel or Morris dance to be added later if there is time.

Section 2.

(Lean St.-U.Gr.) Span. (Wall bars).	} 2 teams.
(St.-Bk.Rst.-D.Gr.) Hn. walk d. (Wall bars).	

(Bk.Ly.-Am.M.) Span.	} 2 teams.
(Hz.Sit.-Tr.D.-Ft.Gr.) Hl. lift. with hands.	

(F.Hg.) Heav. (:). (Wall bars).

Hopping wrestle in pairs.

(Sit.-Fxd.-Hd.Rst.) Tr. lower. b. to 90° (:) (Bench).
 (Sd.St.-Fxd.(Ac.Bd.-Tr.S.) Am. fling. (:) (Bench).
 (St.-1 Am.U.-1 Am.B.) Am. chang. with f. swing., with a step f.
 at each change.
 Revision of marching exercises.

Part II.

(Hv.Hg.-Ur.Gr.) Am. walk s. (Beam). [To be added later].	} 2 teams 1 team. 1 team.
Run. Hi. Face vault. (Low box crossw.).	
Run. Back vault. (Horse crossw.).	
(Sd.St.) Obl. Heav. vault. (2 beams).	
Run. Thro. vault with 1 Lg. leading. (Beam and saddle).	

Notes on two consecutive Tables for a Class of about 32 Boys of 15 to 16 years of age.

These two tables are intended to illustrate the contrast that should appear between consecutive tables. The apparatus supposed to be available includes 16 wall bars, a two-span beam, 8 ropes, 4 benches, 2 beam saddles, vaulting box, horse, buck and jumping stand.

Table A is an example of a table arranged to give special prominence to the exercises of Part II (and for this reason may be regarded as a little exceptional). Part I, therefore, is to be got through fairly quickly. Section 1 is short, but includes a Dorsal exercise transferred from Section 2 because it is a free-standing exercise and is more conveniently taken here. In Section 2 the heaving and balance exercises, which are to be taken together, will occupy little time, and the preparatory vault can be omitted at first. After the benches have been used for the balance exercise they can be placed against the wall ready for the running over obstacles. Part II begins with a set of competitive jumps and vaults, in which the teams set their own standards. When this is completed, agility exercises are taken by the teams under their leaders, or class boxing is taken by the teacher.

Table B has a specially full Section 1, and two heaving exercises are included, one in Section 2, the other in Part II, where it is linked up with the vaulting exercises. In Section 1 the exercises marked for the first two lessons are preparatory to those marked for the third lesson, and will be dropped when the latter are taken up. When the class has got well into the Table, it may be possible to find time for some dancing steps at the end of this section, where they will form a useful "break" between Sections 1 and 2. In Section 2 the two types of spanning exercises, and their complementary exercises of Trunk bending downward, can be taken simultaneously, each by half of the class. It should not be difficult for the teacher to command both of the spanning exercises. For the complementary exercises, after explaining what is to be done

by each half of the class, he would command—*Begin ! Stop !* At the next lesson the half classes would exchange exercises. At the third lesson all should know where to go and what to do when the teacher commands—*Ready for spanning exercises !*

In Part II the four vaulting exercises will go on simultaneously. When time permits, the second heaving exercise will be included, and will be taken by two teams under the teacher while each of the other teams under its leader practices a vault. When these exercises are finished, the teams change places, those who have been vaulting going to the beam. When the second party has finished the heaving exercise, all the four vaults are practised, the teams being redistributed so that each has a different vault from that which it practised during the heaving exercise. The last two vaults are supposed to be comparatively new to the class and to require the teacher's personal supervision ; they are therefore reserved until the heaving exercise is completed.

CHAPTER II.

TERMINOLOGY.

An accurately descriptive terminology is required for the exercises employed in physical training, because every alteration in the form of an exercise produces a corresponding change in its effect, and as the teacher needs to know precisely what effects the exercises will have, the names given to the exercises must exactly indicate their nature. In order that such a terminology may be of reasonable brevity, the terms employed—or many of them—must be to some extent conventional, and it is necessary that the teacher should know the meaning of each term. An explanatory list of the terms used is therefore indispensable.

Every exercise consists in a starting position and a series of movements carried out from it, the starting position determining to a large extent the kind of effect which the movements will produce. In the following list the names of starting positions are given first, then the names of movements and the terms used to define their character, and finally an explanation of how the various elements of the terminology are arranged to form the names of the exercises.

All the starting positions are derived from certain simple fundamental positions of the body, such as standing, sitting and lying, which may themselves be used as starting positions. Positions resulting from some more or less general modification of these fundamental positions, e.g. by standing on a narrow plank, as in Balance Standing, are called Modified Fundamental Positions. Positions resulting from local change in the posture of a limb or of the head or the trunk are called Derived Positions.

TERMINOLOGY.

1. Names of Positions.

Fundamental Positions.

<i>Name of Position.</i>	<i>Abbreviation.</i>	<i>Definition.</i>
1. Standing ..	(St.) ..	Standing in the position of "Attention."
2. Sitting ..	(Sit.) ..	Sitting on apparatus with the feet resting on the ground, the knees being bent or straight.
3. Kneeling ..	(Knl.) ..	Kneeling with the knees separated and the body and thighs erect.
4. Back Lying ..	(Bk. Ly.) ..	Lying stretched out horizontally on the back.

<i>Name of Position.</i>	<i>Abbreviation.</i>	<i>Definition.</i>
5. Prone Lying .. (Pn.Ly.) ..		Lying stretched out horizontally face downwards.
6. Front Support .. (Fr.Sup.) ..		The body, kept straight and face downwards, rests on the hands and toes, which are supported at the same level.
7. Side Support .. (Sd.Sup.) ..		The body, kept straight, rests sideways on one hand and the outside of one foot, which are supported at the same level.
8. Balance Support (Bal.Sup.) ..		The body, with head and legs pressed slightly back, is supported by the arms above an apparatus, against which the thighs rest.
9. Hand Standing.. (Hn.St.) ..		The body in an inverted position is supported by the arms.
10. Hanging .. (Hg.) ..		Hanging by the arms.

Modified Fundamental Positions.

11. Balance Standing (Bal.St.) ..		Standing on a diminished base, and facing along the apparatus.
12. Front Standing.. (Fr.St.) ..		Standing facing the apparatus to be used.
13. Side (Sd.) ..		(1) In Side Standing : standing with one side turned towards the apparatus to be used. (2) In Side Sitting : sitting on one thigh with both legs on the same side of the apparatus.
14. Bent (Bt.) ..		In Bent Front Support : the hip joints are bent so that the legs, kept straight, form an angle with the trunk. (See also Bent Backward Hanging).

<i>Name of Position.</i>	<i>Abbreviation.</i>	<i>Definition.</i>
15. High (Hi.)		(1) In High Standing and High Sitting: standing or sitting on apparatus so as to be wholly above the level of the ground. (2) In High Prone Lying: the body rests across an apparatus, and is supported on the thighs or abdomen only. (3) In High Front Support and High Side Support: the hands or hand supported above the level of the feet.
16. Low — ..		In Low Front Support: the hands supported below the level of the feet so that the feet are higher than the head.
17. Horizontal .. (Hz.)		(1) In Horizontal Sitting: the legs are straight and supported horizontally. (2) In Horizontal Front Support and Horizontal Side Support: the hands or hand supported below the level of the feet so that the body is horizontal. (3) In Horizontal Kneeling: the trunk is horizontal and is supported on the hands and knees.
18. Across (Ac.)		In Across High Standing and Across Balance Standing: standing on apparatus so as to face across it.
19. Astride Sitting .. (Asd. Sit.) ..		Sitting with one leg on each side of an apparatus.
20. Kneel Sitting .. (Knl.Sit.) ..		Kneeling and sitting back on the heels.
21. Rest (Rst.).. ..		A named part of the body rests against an apparatus.

<i>Name of Position.</i>	<i>Abbreviation.</i>	<i>Definition.</i>
22. Back Lean Stand- ing.	(Bk.Lean St.)	Standing with the back resting against a vertical apparatus with the feet advanced.
23. Heave Hanging	(Hv.Hg.) ..	Hanging with the arms bent and the head raised to the level of the hands.
24. Forward Hanging	(F.Hg.) ..	The body, with head pressed backwards, hangs forward by the arms, with the straight legs carried backward and the toes resting on the ground.
25. Backward Hang- ing.	(B.Hg.) ..	The body, kept straight, hangs backward by the arms, with the heels resting on the ground.
26. Bent Backward Hanging.	(Bt.B.Hg.) ..	The same as Backward Hanging but with the hip joints bent.
27. Reversed Hang- ing.	(Rvs.Hg.) ..	The position of the body reversed and hanging head downwards.

Derived Positions of the Arms.

28. Upward Bend ..	(U.Bd.) ..	The fingers touch the shoulders, the elbows by the sides, the arms turned outwards.
29. Across Bend ..	(Ac.Bd.) ..	The elbows sideways, level with the shoulders and fully bent, the hands in front of the shoulders, palms downward.
30. Forward Bend ..	(F.Bd.) ..	The elbows forward level with the shoulders, the fingers clenched or loosely closed, one hand over, and the other under, the opposite shoulder.
31. Hands on Hips..	(Hn.Hp.) ..	The backs of the fingers rest lightly on the crest of the hips.
32. Low Hands on Hips.	(Low.Hn.Hp.)	The hands, thumbs behind and fingers in front, rest lightly against the thighs a little above the hip joints.

<i>Name of Position.</i>	<i>Abbreviation.</i>	<i>Definition.</i>
33. Hands on Thighs	(Hn.Th.) ..	The fingers rest against the front of the thighs, the arms by the sides.
34. Forehead Rest ..	(Fh.Rst.) ..	In Prone Lying and Kneel Sitting positions the head rests upon the backs of the hands which are placed on the ground beneath the forehead.
35. Head Rest ..	(Hd.Rst.) ..	The finger tips touching on the top of the head, wrists straight, elbows drawn back.
36. Neck Rest ..	(Nk.Rst.) ..	The finger tips touching the back of the head, wrists and fingers straight, elbows drawn back.
37. Arms Forward ..	(Am.F.) ..	The arms extended horizontally forward with the palms inward.
38. Arms Sideways ..	(Am.S.) ..	The arms extended horizontally sideways with the palms downward.
39. Arms Upward ..	(Am.U.) ..	The arms extended upward with the palms inward.
40. Arms Midway ..	(Am.M.) ..	The arms extended midway between sideways and upward.
41. Arms Crossed ..	(Am.C.) ..	The arms, hanging loosely, are crossed just above the wrists in front of the body.
42. Arms Backward	(Am.B.) ..	The arms raised backward.
43. Arms Downward	(Am.D.) ..	The arms hang downward.
44. Grasp	(Gr.) ..	One or both hands grasp an apparatus or the hands of other persons.
45. Upward Grasp	(U.Gr.) ..	} The arms stretched in the named directions, and the hands grasping apparatus. Used chiefly in the Standing positions.
46. Downward Grasp	(D.Gr.) ..	
47. Forward Grasp ..	(F.Gr.) ..	
48. Sideways Grasp	(S.Gr.) ..	
49. Backward Grasp	(B.Gr.) ..	
50. Midway Grasp ..	(M.Gr.) ..	
51. Ankle Grasp ..	(Ak.Gr.) ..	The hands grasp the legs round the ankles.

<i>Name of Position.</i>	<i>Abbreviation.</i>	<i>Definition.</i>
52. Neck Grasp .. (Nk.Gr.) ..		The elbows are raised forward and the tips of the fingers are interlaced behind the neck.
53. Heave Grasp .. (Hv.Gr.) ..		The hands grasp apparatus at the level of the head, the elbows bent and turned outward.
54. Inward Grasp .. (In.Gr.) ..		The hands grasping with the palms turned inward.
55. Over Grasp .. (Or.Gr.) ..		The hands grasping in pronation.
56. Under Grasp .. (Ur.Gr.) ..		The hands grasping in supination.
57. Alternate Grasp (Alt.Gr.) ..		One hand grasping in supination, the other in pronation.
58. Chain (Cn.) ..		<p>(1) The pupils standing in rank, circle or files, grasp the hands or shoulders of those standing by their sides. These grasps are distinguished by the position of the arms as follows :—</p> <p>(a) Low : the arms hanging loosely.</p> <p>(b) High : the hands at about the level of the crown of the head, the elbows slightly bent.</p> <p>(c) Long : the arms fully extended sideways.</p> <p>(d) Short : the hands placed on partners' shoulders.</p> <p>(e) Elbow : the elbows are linked together.</p> <p>(2) Ring : couples face each other and hold hands or place hands on shoulders.</p> <p>(3) Zig-zag : two ranks, each boy facing an interval in the other rank and linking hands or elbows with the pair who form this interval.</p>

<i>Name of Position.</i>	<i>Abbreviation.</i>	<i>Definition.</i>
59. Reversed ..	(Rvs.) ..	(1) In Balance Support Reversed Grasp, the hands grasp the apparatus with the fingers backwards instead of forwards. (2) In Reversed Arm Sideways the palms of the hands are turned upwards. (3) In Reversed Arm Backward, the palms of the hands are turned forward and outward.
60. Clenched ..	(Clen.) ..	The fingers are clenched.
61. Clasped ..	(Clp.) ..	The hands clasped or fingers interlaced. When no other position of the arms is given, the term indicates that the elbows are bent and the hands clasped in front of the body.

Derived Positions of the Legs.

62. Feet Close ..	(Ft.Cl.) ..	The feet directed forward with their inner sides touching.
63. Feet Full Open..	(Ft.Fl.Op.) ..	The heels touching, the feet turned out and forming a right angle between them.
64. Foot Forward ..	(Ft.F.) ..	One foot placed directly forward, the heels two foot-lengths apart.
65. Foot Outward ..	(Ft.O.) ..	After taking the Feet Open position, one foot is advanced in the direction it is pointing, with two foot-lengths between the heels.
66. Astride ..	(Asd.) ..	The feet separated by two foot-lengths, either by carrying one foot sideways this distance, or by moving each foot one foot-length sideways.

<i>Name of Position.</i>	<i>Abbreviation.</i>	<i>Definition.</i>
67. Wide Astride ..	(Wd.Asd.) ..	As "Astride" but with the feet three foot-lengths apart. Taken by moving one foot this distance sideways.
68. Lunge Forward	(Ln.F.) ..	Standing with one foot placed forward $2\frac{1}{2}$ to 3 foot-lengths, the advanced knee bent and turned outward, the body and back leg in one line and inclined forward over the advanced foot.
69. Lunge Sideways	(Ln.S.) ..	After taking the Feet Full Open Position, one foot is placed 3 foot-lengths directly sideways, the knee is bent and turned outward, and the body and other leg in one line are inclined sideways.
70. Lunge Outward	(Ln.O.) ..	After taking the Feet Open position, one foot is placed $2\frac{1}{2}$ to 3 foot-lengths in the direction it is pointing and its knee is bent, the body and the back leg in one line are inclined over the advanced foot.
71. Toe Lunge ..	(Toe Ln.) ..	The same as the Lunge Forward position, but with the back ankle stretched and the toe lightly touching the ground.
72. Balance Lunge ..	(Bal.Ln.) ..	The same as the Toe Lunge position, but with the back leg raised from the ground with the heel level with the shoulders.
73. Toe Forward ..	(Toe F.) ..	<div style="display: flex; align-items: center;"> <div style="font-size: 4em; margin-right: 10px;">{</div> <div> Standing on one leg, the other leg with ankle stretched is moved in the named direction with the toe lightly touching the ground. </div> </div>
74. Toe Sideways ..	(Toe S.) ..	
75. Toe Backward ..	(Toe. B.) ..	

<i>Name of Position.</i>	<i>Abbreviation.</i>	<i>Definition.</i>
76. Leg Forward ..	(Lg.F.) ..	} Standing on one leg, the other leg raised in the named direction with the ankle stretched.
77. Leg Sideways ..	(Lg.S.) ..	
78. Leg Backward ..	(Lg.B.) ..	
79. Heels Raise ..	(Hl.Ra.) ..	Standing on the balls of the feet.
80. Knees Bend ..	(Kn.Bd.) ..	Standing on the balls of the feet with the knees bent to a right angle and turned outward.
81. Knees Full Bend	(Kn.Fl.Bd.)	Standing on the balls of the feet with the knees fully bent and turned outward.
82. Crouch	(Crh.) ..	As in the Knees Full Bend position but with the body inclined forward, the elbows between the knees, and the palms of the hands resting on the ground.
83. Knee Raise ..	(Kn.Ra.) ..	(1) In Standing Knee Raise, standing on one leg, the other knee bent and raised so that the thigh is horizontal and the leg vertical, with ankle stretched. (2) In Horizontal Sitting Knee Raise, sitting with the feet supported at the same level as the seat, and the knees drawn up. (3) In Back Lying Knee Raise, lying on the back with the knees drawn up, the feet resting on the ground. (4) In Hanging Knee Raise, hanging with both knees raised as in (1).
84. Knee Raise Open	(Kn.Ra.Op.)	As in Knee Raise, but with the knees widely separated, and in the Horizontal Sitting Knee Raise Open position with the soles of the feet pressed together.

<i>Name of Position.</i>	<i>Abbreviation.</i>	<i>Definition.</i>
85. High Knee Raise	(Hi. Kn. Ra.) ..	As in Knee Raise (1) and (4), but with the knee or knees raised as high as possible; in the Lying Position the feet are raised from the ground. In Back Lying High Knee Raise the thighs are vertical with the knees fully bent.
86. Fixed	(Fxd.) ..	One or both feet fixed in or under apparatus, or held by another person.
87. Leg Raise ..	(Lg. Ra.) ..	(1) In Hanging Leg Raise, both legs are raised at right angles to the trunk. (2) In Back Lying Leg Raise the legs are raised to an angle of 45° to the ground.
88. High Leg Raise	(Hi. Lg. Ra.) ..	(1) In Hanging High Leg Raise, the legs are raised with the thighs close to the trunk. (2) In Back Lying High Leg Raise the legs are extended vertically upward.

Derived Position of the Arms and Legs.

89. Single	(1)	One arm or leg only is placed in a named position.
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Derived Positions of the Trunk.

90. Trunk Forward	(Tr. F.) ..	The trunk inclined forward from the hip joints.
91. Trunk Backward	(Tr. B.) ..	The trunk inclined backward from the hip joints, or the trunk and thighs from the knee joints.
92. Trunk Sideways	(Tr. S.) ..	The trunk inclined sideways by lateral tilting of the hips.
93. Trunk Downward	(Tr. D.) ..	The trunk bent forward as far as possible.
94. Trunk Turn ..	(Tr. Tn.) ..	The trunk turned (rotated) to one side.

2. NAMES OF MOVEMENTS.

(a) *Of the Limbs.*

Raising (rais.)	..	..	Raising the named part slowly or at a moderate speed ; if the whole limb is named it is kept extended.
Lowering (lower.)	..	..	Lowering the named part slowly or at a moderate speed ; if the whole limb is named it is kept extended.
Carrying (carry.)	..	..	Moving the limbs in a more or less horizontal direction.
Parting (part.)	..	..	Moving the extended limbs away from each other from a position in which they are parallel.
Bending (bend.)	..	..	Flexing the limbs.
Stretching (stretch.)	..	..	Extending the limbs.
Turning (turn.)	..	..	Rotating the extended limbs.
Flinging (fling.)	..	..	Moving the forearm between the Am. S. and Ac. Bd. positions.
Punching (punch.)	..	..	Hitting out with the closed fist.
Swinging (swing.)	..	..	Moving the extended limbs rapidly in a named direction.
Closing (clos.)	..	..	Bringing the inner borders of the feet together.
Opening (open.)	..	..	Turning the feet out so as to form an angle between them.
Placing (plac.)	..	..	Moving a foot (<i>a</i>) to a position two foot-lengths from the St. position, or (<i>b</i>) to rest the toe on the ground.
Lunging (lung.)	..	..	Moving from the St. position to a lunge position.
Recovering (recover.)	..	..	Returning to the St. position after Foot or Toe placing or Lunging.
Changing (chang.)	..	..	(1) Reversing the positions of the arms or legs when they are not symmetrical. (2) Changing from one named position to another.
Circling (circl.)	..	..	Circumduction of the arm.

(b) *Of the Trunk.*

Lowering (lower.)	Inclining the extended trunk forward, backward or sideways by movement in the hip or knee joints.
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(Note.—In order to conform with the “Syllabus of Physical Training for Schools,” the term Trunk bending forward is employed for this movement when carried out in the standing position.)

Raising (rais.)	..	..	Raising the extended trunk to the erect position by movement in the hip or knee joints.
Bending (bend.)	..	..	Bending the trunk forward or sideways.
Stretching (stretch.)	..	..	Extending the trunk after bending it.
Turning (turn.)	..	..	Rotating the trunk on its axis.
Rhythmical pressing (Rhyth. press.)			The trunk is bent downward or sideways, and then a series of strong efforts (each followed by a slight relaxation) is made to bend the trunk downward or sideways as far as possible.

(c) Of the Head.

Pressing (press.)	..	..	Drawing the head backward with the chin drawn in.
Rhythmical pressing (Rhyth. press.)			The head is pressed backwards, and then a series of strong efforts (each followed by a slight relaxation) is made to press the head back as far as possible.
Bending (bend.)	..	..	Flexing the neck forward, backward, or sideways.
Stretching (stretch.)	..	..	Extending the neck from a flexed position.
Dropping (drop.)	..	..	The head is allowed to drop loosely forward or backward.
Turning (turn.)	..	..	Turning the head to the side.
Circling (circl.)	..	..	Circumduction of the head.

(d) Of the Body as a whole.

Turning (turn.)	..	..	Turning the whole body so as to face in a new direction. The amount of the turn is indicated by the fraction of the whole circle to be turned through, i.e. $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$.
Changing (chang.)	..	..	Changing from one named position to another, e.g. changing between Forward Hanging and Backward Hanging.
Spanning (span.)	..	..	Raising the body to an arched position between two fixed points provided by the arms (hands or elbows) and by the feet, knees or buttocks.

Hand Shifting (Hn.shift.) .. Shifting the position of the hands on an apparatus without carrying the body away from its position, e.g. (High Standing—Arms Upward Grasp) Hand shifting downward and upward. (Wall bars).

(e) Movements in Hanging Position.

Heaving (heav.) In a Hanging Position, raising the body by bending the arms; in Prone Lying and Back Lying positions, drawing the body along head first by the arms.

Lowering (lower.) In a Heave Hanging Position, lowering the body by straightening the arms.

Arm Walk (Am.walk.) .. The body supported by the arms, is transported from one place to another by successive shifts of the hands (sometimes assisted by the legs).

Arm Jump (Am.jump.) .. As Arm Walk, but both hands are shifted at the same time.

Circling (circl.) Turning over or under an apparatus on which the body hangs.

Climbing (climb.) Climbing on ropes and ladders with the hands and feet.

Twisting (twist.) Twisting the body, head or feet first, through the openings of a Window Ladder.

(f) Movements of Leaping.

(1) The Run, for getting up speed.

(2) The Spring, i.e. the act of leaping from the ground, may be taken off one foot as in ordinary jumping, or off both feet together as in most of the vaults.

(3) The Flight, i.e. the passage of the body through the air, during which the hands may be placed on apparatus.

(4) The Landing, which commences when the feet again touch the ground, and is completed when the descent is stopped. It may be made on one foot or on both.

Leaping Exercises are of two kinds, namely:—

(a) Jumping, in which no part of the body touches apparatus during the flight.

(b) Vaulting, in which the hands are placed on apparatus in order that the arms may assist the flight.

(g) *Direction, Speed, Extent and Order of Movements.*

The abbreviations are given in capitals only when they appear in the name of a Starting position or at the beginning of the name of the movement, e.g. (St.-Am.U.) Am. stretch. s., (St.) U. jump.

forward (f.)	horizontally (hz.)
backward (b.)	vertically (vert.)
upward (u.)	diagonally (diag.)
downward (d.)	zig zag
outward (o.)	quick
sideways (s.)	moderate (modt.)
midway (m.)	slow
spirally	full (fl.)
right (r.)	slight
left (l.)	high (hi.)
about	

alternate (alt.) One arm (or leg) moves towards one limit of the movement while the other arm (or leg) moves towards the other limit.

opposite (opp.) Different parts of the body on opposite sides move at the same time.

with—as in : Heel raising *with* Knee bending. It indicates that the knees are to be bent *at the same time* as the heels are raised.

and—as in : Heel raising *and* Knee bending. It indicates that the knee bending *follows* the raising of the heels.

Single (1)—only one arm or leg is moved.

Double (2)—both arms or both legs are moved.

(h) *Terms and Signs used to give Additional Information as to the manner in which the Exercise is to be carried out.*

(Placed in brackets after the name of the movement.)

(1-2) }
(1-4) } Indicate that the exercise is to be carried out in 2, 4, etc.,
(1-6) } movements.
(1-8) }

Rhythmically (rhyth.).—Indicates that a sequence of movements is to be repeated rhythmically a specified number of times, or until stopped by command.

In stream.—The Pupils follow each other in quick succession, e.g. Running High Jump (in stream).

Teacher Counting (T.C.).—The teacher counts aloud for the separate movements.

Class Counting (C.C.).—The Class count aloud for the separate movements.

(i) *The Nature of the Apparatus to be used, and its Adjustments*

This is given in brackets after the name of the movement. The name of the apparatus is given, the height to which its *upper surface* is to be adjusted, usually in relation to a named part of the body, and its direction with regard to the class, etc., e.g. :—

oblique (obl.)	{ Vaulting apparatus placed with its long axis at an oblique or a right angle to the direction of the run, or in the same direction as the run.
crosswise (crossw.)	
lengthways (lengthw.)	

Examples :—Beam at hip height, Benches lengthways, Box oblique at knee height, Horse crosswise with pommels.

(:)—signifies that in performing the exercise the pupil is to have support or assistance from another person.

(: :)—signifies that in performing the exercise the pupil is to have support or assistance from two other persons.

3. NAMES OF PARTS OF THE BODY.

(A capital letter is always used in these abbreviations.)

Ankle (Ak.)	Forehead (Fh.)	Hip (Hp.)	Shoulder (Sh.)
Arm (Am.)	Foot (Ft.)	Knee (Kn.)	Thigh (Th.)
Back (Bk.)	Hand (Hn.)	Leg (Lg.)	Toe
Chest (Ch.)	Head (Hd.)	Loin	Trunk (Tr.)
Elbow (El.)	Heel (Hl.)	Neck (Nk.)	

4. THE ARRANGEMENT OF THE NAMES OF EXERCISES.

The name of the Starting Position, enclosed in brackets, is given first in the name of the exercise ; then the name of the Movements to be carried out ; and finally, in brackets, any special directions as to the manner in which the exercise is to be performed or conducted (e.g. In Stream, Teacher Counting), and the nature and adjustment of the apparatus to be used. In Leaping exercises, the name of the position taken before the movement commences is omitted unless it is important to define it.

The terms used to define the Starting Position are arranged in the following order :—(1) That of the Fundamental or Modified Fundamental Position ; (2) that of the Derived Position or Positions, which are usually arranged in the order of legs, arms and trunk. The name of an alternative Starting Position is placed in square brackets, e.g. (St.—[Asd.]—U.Bd.).

Note.—In the commands given in Part II, those for taking the Starting Position, and for returning to the Standing Position after completing the Movements of the exercise, are enclosed in brackets.

PART II

DESCRIPTIONS OF EXERCISES.

CHAPTER III.

THE STANDING POSITION.

A CORRECT standing position is fundamental to a correct performance of nearly all gymnastic exercises. The following are the main points to be thought of :—

Heels together and in line, feet turned out at an angle between their inner borders of 45° .

Knees straight.

Body erect, i.e. stretched well up, neither leaning forward nor hanging back on the heels, the chest in its natural position, the loins not unduly hollowed nor the abdomen pushed forward.

Shoulders square to the front, moderately drawn back and hanging naturally, i.e. not hunched up.

Arms hanging straight and easily from the shoulders, the palms lightly touching the outer side of the thighs, fingers straight and thumbs close to them.

Head erect without stiffness, eyes looking straight to the front at their own level, chin slightly drawn in (Figs. 1 and 4(a)).

The standing position is one of readiness and alertness ; there should be no stiffness or strain. The correctness of the position as a whole mainly depends upon the effort to lift the head as high as possible, and the stimulus to make this effort may be usefully given by such directions as "*Stretch up !*" "*As tall as you can !*" etc. This effort in itself corrects the common tendency to slouch back on the heels.

While the shoulders should be moderately drawn back, care should be taken that directions from the teacher do not result in a strained and rigid attitude, with the shoulders braced right back and more or less hunched up.

A common fault is to draw the hips back and hollow the loins, usually in a mistaken effort to hold the body well. If this is not sufficiently corrected by the injunction to "*stretch the body up,*" it may help the boy to understand the nature of the effort required if, in addition, he is directed to contract ("*make hard*") the muscles of the buttocks.

Since the standing position requires a certain degree of effort, and must be maintained with perfect stillness, the boys should not be expected to hold it for more than a brief period.

The command for taking the position is *Atten—tion !*

BREATHING EXERCISES.

A Breathing Exercise consists of a combination of movements partly of the body muscles and partly of the lungs themselves, the first result of which is a deeper inspiration and a more complete expiration than occurs in ordinary breathing. It may be said that in a certain sense every physical exercise, and particularly every active exercise, is a Breathing Exercise. The term "Breathing Exercise," is, however, here restricted to certain definite movements, of which the exercises described below may be taken as examples.

Breathing Exercises serve to correct the ill-effects on the chest and lungs of tight clothing, stooping postures, habits of shallow breathing and mouth breathing. They promote free movement of the chest wall and healthy and full development of the lungs.

1. Breathing (for rhythm and control).

Starting position, "Standing easy."

Command :

Breathe to numbers—one ! two !

The breathing in on 1 and out on 2 must be done freely and naturally ; a short pause is made between the inspiration and expiration, and again before the succeeding inspiration. No emphasis should be laid on breathing deeply, but definite rhythm and control should be looked for. The counting is only intended to suggest to the class a rhythm, which need not be adhered to closely.

2. Breathing (for greater expansion of the chest and lungs).

Starting position, "Standing easy."

Command :

Deep breathing to numbers—one ! two !

The movement is rhythmical and controlled as before. As somewhat deeper inspiration is aimed at, the counting must be slightly slower. The deeper inspiration must not be obtained at the expense of ease of movement.

Arm movements may be combined with deep breathing and produce good expansion of the chest. They should be thoroughly familiar to the class before being used in this way, otherwise the pupils' attention may be concentrated on the arm exercise, instead of, as it should be, on the breathing.

The following may be taken as examples of arm movements which may be combined with Breathing Exercises :—

Arm raising sideways.

Arm raising upward from Am. S. position.

Arm raising forward and upward, lowering sideways and downward.

Arm raising sideways and upward, lowering sideways and downward.

The movements of the arms must be slow and must correspond with inspiration and expiration.

For example :—

Arm raising sideways and deep breathing—one ! two !

The class breathe in as the arms are raised, and breathe out as they are lowered.

Head Movements.—A slight head pressing backwards is one of the most effectual movements for combining with a breathing exercise. The head is pressed slightly back during inspiration and is raised again during expiration. The backward pressing lifts and expands the upper part of the chest.

On the whole, simple deep breathing is, perhaps, the most satisfactory form of breathing exercise.

Essential points in the performance of all breathing exercises are as follows :—

(1) The mouth must be kept closed so that the breathing in and out is done through the nose. The nasal passages must be clear ; it is therefore advisable to precede the Breathing Exercise with “ handkerchief drill.”

(2) The movements must be free and unforced. The starting position for the exercises must be unstrained. Standing easy, for example, may be better than “ Attention,” as it is less constrained. The body should be held upright in order to place the chest in the best position for free movement.

(3) The rhythm of the breathing must be modified to suit the age of the class. Children naturally breathe more quickly than adults, and the rhythm also varies with individuals. Some breathing exercises should always be taken in the boys’ own time.

(4) The expiration should be as deep and vigorous as the inspiration, a point which is often overlooked. Both inspiration and expiration may be audible, but not noisy or forced.

Deep breathing should never be given immediately after vigorous exercise. If the boys are out of breath, the jumping or running should be followed by marching or some simple exercise, and the breathing exercise should only be commenced when the class are again breathing quietly.

It is most important that the air should be fresh and free from dust, and when possible Breathing Exercises should be taken out of doors.

CHAPTER IV.

ORDER MOVEMENTS.

1. "Attention" and Standing Easy.

Class, atten—tion! Stand—easy! The standing position, taken on the command "Attention," is described on page 55. To Stand Easy, carry the left foot about a foot-length to the side and stand with the weight of the body equally on both feet. The feet retain their position, but otherwise the limbs and body may be moved as desired to obtain the relaxation required after concentrating upon the performance of an exercise. To come to "Attention" from the Easy position, at the word "class" all movement ceases and the body is stretched up, and at the executive syllable of the word "attention" the left foot is brought in to the right foot and the Standing position taken. With the younger boys the Easy position can be taken with a jump, both feet being moved a little sideways, and the Standing position returned to in the same way. *With a jump, stand—easy! With a jump, atten—tion!*

2. Turning to right and left and about with a jump.

With a jump, left (right) (about)—turn! Take a small jump with both feet and turn in the named direction, turning round to the right if turning about.

3. Turning to right and left and about on heel and toe.

Turning left (right) (about), by numbers—one! two! At "one" (if turning to the right) raise the toe of the right foot and the heel of the left, and keeping the knees straight turn on the right heel, pushing round with the left toe. At "two" bring the left foot up to the right. Later, the turns are made at the commands, *Left (right) (about)—turn!* Each movement should then be made as precisely and quickly as possible.

4. Moving to right and left with a jump.

To the left (right) with a jump—go! Jump with both feet about 12 inches to the left or right.

5. One and two steps f., b. and s.

One step forward (backward), by numbers—one! two! At "one" take a pace forward (backward) with the left foot; at "two," bring the right foot to the left. Later, the boys can count aloud for themselves, and later still the steps are taken at the command "march!"

Similarly for two steps forward or backward, counting to "three." For one step to the left or right count to two, for two steps count to four, and later: *One (two) step(s) to the left (right)—march!*

6. Forming files on leaders.

At first, the leaders or the boys who are to stand at the heads of the files, are placed on marks before the others move. *Leaders on their marks—run! The remainder behind their leaders—run!* Later, all can run together, the leaders taking their places, the others forming up behind them as quickly as possible, at the command: *In your files, fall—in!* All stand easy as soon as they have adjusted their intervals and covered off.

The leaders should be two steps apart and may be either in line with each other, or, if space is limited, the second and fourth from the right may be the distance of a pace behind the other two leaders, so that the boys in their files are opposite the intervals of the other files. The boys in the files should be exactly behind their leaders, and at intervals equal to their own height. This is the normal class formation for free-standing exercises. After a little practice the boys should be able at once to take up their places quite accurately, without any shuffling about to correct intervals and covering.

7. Covering in files.

Files—cover! All cover off exactly behind the leaders as rapidly as possible.

8. Forming two files from four files, and vice versa.

Form two files—go! The second and fourth files from the right run and form up respectively behind the first and third files. *Form four files—go!* The boys who formed the second and fourth files run back to their places.

9. Reversing files.

Reverse the files—go! The leaders turn about and all the remainder run and form up again in file behind them.

10. Forming ranks on leaders.

The leaders can be previously placed. *In ranks on your leaders—run!* All run and stand side by side on the left of their leaders with an inch or two between the elbows.

A rank is, of course, formed from a file by turning the boys to the right or left.

11. Dressing in ranks.

Right—dress! All except the leader on the right glance to the right and move forward or backward so as to straighten the rank. *Eyes—front!* The heads and eyes are turned to the front.

12. Extending ranks.

Extend from the right (left)—go! The boys take each other's hands; the boy at the end of the rank from which the extension is to be made stands still, the remainder move quickly away from him until all arms are fully extended. *Arms—down!* The arms are dropped to the sides.

Extended ranks may be closed up again on the command: *Close up to the right (left)—go!*

CHAPTER V.

LEG EXERCISES.

I. FEET CLOSING AND OPENING.

1. These exercises employ the muscles that rotate the thighs inwards and outwards. They cultivate a sense of the correct position of the feet in standing and are used to ensure the proper angle between the feet for such exercises as toe placing, foot placing, lunging and knee bending. They are also useful for cultivating a sense of rhythm when taken continuously, and with the addition of arm movements provide an early introduction to combined exercises.

The commands for the movements are: *Feet—close! Feet—open!* The heels are kept together and the feet are turned forward with their inner borders touching. The feet are then turned out equally to form an angle between their inner borders of about 45° .

The closing and opening can also be repeated several times by numbers, e.g. *Feet closing and opening by numbers to ten (eleven)—one! . . . ten! (eleven! Feet—open!)*. Later, the boys can count aloud for themselves. *Feet closing and opening, count aloud for yourselves to ten (eleven)—begin! (Feet—open!)* Later still the counting can be discontinued and the movements repeated rhythmically until the command "*Stop!*" the boys keeping time with each other.

The movements of the feet can also be combined with movements of the arms, e.g. **(St.) Ft. clos. and open. with Am. bend. u.**, in which the arms are bent upward while the feet are being closed, and stretched downward while the feet are being opened. *Feet close and arms upward—bend! Feet open and arms downward—stretch!*, or *Feet closing and opening with arm bending upward and stretching downward, by numbers to ten—one! etc.*, or *Counting aloud for yourselves to ten—begin!* Similar combinations can be arranged with arm bending across, taking head rest, or stretching the arms sideways from the U. Bd. position.

2. **(St.) Ft. clos. and Hl. rais., Ft. open. and Hl. rais. (1-3).**

Feet close and heels raise and lower, by numbers—one! two! three! Feet open and heels raise and lower—one! two! three! Repeat to six—one! . . . six! Later: *Feet closing and opening, and heel raising and lowering—begin!*

The movements should be precise, fairly quick, and with slight but definite pauses between them. The whole should be in an even rhythm.

II. TOE PLACING.

These exercises train the sense of direction in leg movements and help to cultivate balance. They give various starting positions used in other exercises.

3. In toe placing exercises the commands used are : *Left (right) toe forward (backward or sideways)—place!* Fig. 2. The leg is carried in the named direction with the knee and ankle fully extended, and the toe lightly touches the ground. The body is kept erect and still, and its whole weight is supported by the other leg. In order to ensure that no weight is placed on the toe, the boys may be directed to tap it on the ground. *Recover—place!* The foot moved is brought back to its original position. The positions of the feet may be reversed by the command : *Change feet by numbers—one! two!* At “one” the moved foot is brought back, at “two” the other is put out.

Later, the commands used are : *Toe placing sideways (forward, backward), by numbers, begin with the left (right)—one! two! three! four!*, and later still the boys may count aloud for themselves.

Toe placing may be combined with arm movements, e.g. taking head rest, or raising the arms sideways, or sideways and upward, the arms being raised as the toe is placed out and lowered as the foot is recovered. *Toe placing forward with arm raising sideways, by numbers—one! . . . four!*

III. FOOT PLACING.

These exercises in their simple form are chiefly useful for providing practice in taking the starting positions used in many other exercises. They are also employed in combination with arm exercises for the purpose of developing the power of co-ordinated movement and accurate timing. They help to teach the proper use of the legs in marching.

(i) Foot Placing Astride.

4. The feet are placed sideways an equal distance, either both feet together with a jump, or one foot at a time, so that there is a distance between the heels equal to twice the length of the performer's foot. The angle of the feet remains the same as in the St. position. Figs. 3 and 4(b).

For feet placing astride with a jump the commands are : *With a jump, feet astride—place!* *With a jump, feet together—place!* The exercise may be combined with arm swinging sideways or sideways and upward : *With a jump and arms swinging sideways, feet astride—place!* *With a jump and arms swing downward, feet together—place!* *Repeat by numbers—one! two!*

5. For feet placing astride in two movements the commands are : *Feet astride by numbers—one! two!* At “one” the left foot is moved to the left one foot-length, at “two” the right foot is moved to the right an equal distance. *Feet together by numbers*

—one! two! At “one” the left foot is moved to the right one foot-length, at “two” the right foot is brought back to the left foot. The counts should follow one another fairly quickly. The body must not be allowed to sway about; this is prevented by bending the knees and lifting the feet well clear of the ground. Later, the boys may count aloud for themselves, *Counting aloud for yourselves, feet astride—place!*

The movements of the feet may be combined with arm movements: *With arm bending upward, feet astride—place!* or *With arm stretching midway, feet astride—place!* In the first case there is only one movement of the arms, and this is combined with the second movement of the feet, either in placing them astride or together; in the second case, the first and second movements of the arms are combined respectively with the first and second movements of the feet. This rule holds good for all such combinations of arm and leg movements; whether the arms or the legs have the greater number of movements, they *complete* the general movement together.

(ii) *Foot Placing Sideways.*

These are simple movements, but they are well adapted for rhythmic repetition and for combination with other leg movements, such as heel raising and knee bending, and with arm movements. They are thus very valuable exercises for the development of precision and control and the proper timing of movements.

6. In teaching the movements, the commands used are: *Left (right) foot sideways—place!* Lift the foot and place it sideways two foot-lengths from its former position; keep the body erect and carry it sideways with the leg so that its weight rests equally on both legs. Fig. 4(c). *Recover—place!* Bring the foot back to its former position.

When the movements are understood, the commands used are: *Foot placing sideways, by numbers, begin with the left (right)—one! two! three! four!* Later, the boys can count aloud themselves; later still, the movements can be repeated continuously until the command “*Stop*”!, which should be given as the feet come together.

7. Foot placing sideways can be combined with arm movements, e.g. **(St.) Ft. plac. s. with Am. bend. u.**, for which the commands are: *With arm bending upward, left foot sideways—place!* *With arm stretching downward, foot recover—place!*, and later: *Foot placing sideways with arm bending upward, by numbers—one! two! three! four!* The rule for these combinations is given in the preceding section.

8. Foot placing sideways is combined with Heel raising, e.g. in the exercise **(St.-Hn.Hp.) Ft. plac. s. with Hl. rais. (1-4)**, at the commands: *Foot placing sideways and heel raising, by numbers, left foot—one! two! three! four!* *Repeat with the right foot—one! etc.* At “one” the foot is placed sideways, at “two” the heels

are raised, at " three " the heels are lowered, at " four " the foot is recovered. Later, the exercise is carried out first with the left foot and then with the right in eight counts : *Foot placing sideways and heel raising, by numbers, left and right foot—one ! etc.* Finally, this exercise and Exercises 9 and 10 are carried out without counting at the command : *Begin !*

Similarly, foot placing sideways can be combined with heel raising and knee bending, first with six counts for each foot, then with twelve counts for both feet. *Foot placing sideways and heel raising and knee bending, by numbers, left foot—one ! etc. Repeat to the right—one ! etc.*

9. Foot placing sideways and heel raising, or heel raising and knee bending, can be combined with arm movements, e.g. (St.) **Ft. plac. s. and Hl. rais. with Am. stretch. u. and d.** (1-4, later 1-8), on the commands : *Foot placing sideways and heel raising, with arm stretching upward and downward, by numbers, left foot (left and right feet)—one ! . . . four ! (one ! . . . eight !)*

10. (St.-Low.Hn.Hp.) **Ft. plac. wide s.**

Left (right) foot wide sideways—place ! Recover—place !, and later, Foot placing wide sideways, by numbers, left and right foot—one ! two ! three ! four ! Move the foot sideways about three foot-lengths from its former position, and as it touches the ground bend the knee and then straighten it. Fig. 4(d). In recovering, first bend the knee and ankle, then stretch them sharply and push off the ground with the toes with sufficient force to throw the weight of the body over on to the other leg ; lower the raised leg alongside of the other. Keep the body erect throughout the exercise. The tempo of the movements is rather slower than in ordinary foot placing sideways.

11. (St.-Wd.Asd.-1 Kn.Bd.-Low Hn.Hp.) **Rhyth. Take-off.**

(Hands low on—hips ! Left foot wide sideways—place ! Left knee—bend !) Taking-off—begin ! Stop ! Push off with the left leg as in recovering (see preceding exercise), but without bringing the body over the right foot, and keeping the stretched left leg raised sideways ; drop on to the left foot again, bending the knee as the foot touches the ground ; take off again, and so on. Keep the right leg straight and the body erect throughout. Fig. 5.

This exercise can be combined with arm flinging from the Ac. Bd. position, or with arm stretching sideways from the U.Bd. position. Fling or stretch the arms sideways as the foot takes off, and bend them as the foot comes to the ground again.

(iii) *Foot Placing Forward.*

12. (St.) **Ft. plac. f.**

Left (right) foot forward—place ! Recover—place ! Move the foot straight forward and place it down about two foot-lengths from its former position, keep the body erect and carry it forward with

the leg so that its weight rests equally on both legs. The foot should be turned out at the same angle as it had before being moved. Fig. 6. In recovering, stretch the ankle sharply, pushing off the ground with the toes, and bring the foot back to the other without bending the knee. Keep the body erect and do not throw its weight backwards in recovering the foot.

When one foot is forward, the position of the feet may be reversed on the command : *Change feet by numbers—one ! two !* At "one" the advanced foot is brought back, at "two" the other is advanced ; later, the change is made on the command : *Feet change—place !*

A series of movements may be made on the command : *Foot placing forward, by numbers—one ! two ! three ! four !* Left foot forward, and back, right foot forward, and back. Later, the boys can count aloud for themselves, and later still the counting can be discontinued and the foot placing continued until the command " *Stop !* ", which should be given as the feet are brought together.

Foot placing forward can be combined with arm movements, e.g. arm flinging from the Ac. Bd. position : *Foot placing forward with arm flinging, by numbers—one ! . . . four !* Left foot forward and arms flung sideways, left foot back and arms bent, etc.

Foot placing forward can also be combined with heel raising and arm stretching (see Exercise 9).

IV. LUNGING.

13. Warlike lunge outward.

For punching, arms—bend ! With a lunge to the left—punch ! To the right—punch ! This is a free form of lunging. Lunge out to the left and punch with the left hand, then quickly recover.

14. (St.-Ft.Fl.Op.-Hn.Hp.) Lung. o. in 3 counts.

(*Feet to a right angle ! Hands on—hips !*) The hands are placed on the hips and the feet are opened until their inner borders form an angle of 90°. *Outward lunge, by numbers, left foot—one ! two ! three !* At "one" move the left foot in the direction it is pointing and place it down three foot-lengths from its former position ; at "two" bend the left knee to a right angle, thus inclining the body and right leg, which are kept in a straight line, Fig 7 ; at "three" stretch the left knee and ankle sharply and push off the ground with the toes with sufficient force to throw the weight of the body over on to the right leg ; lower the left leg and place the left foot by the right. The sole of the right foot must be kept flat on the ground throughout, and the foot must not be allowed to turn over on its inside edge. The movements should be fairly quick, and should be repeated several times to the left before changing to the right.

15. (St.-Ft.Fl.Op.-Hn.Hp.) Lung. o. with toe pointing.

Outward lunge with toe pointing, by numbers, left foot—one ! two ! three ! four ! At "one" place the left toe outward (see Exercise 3) ; at "two" raise the toe and slide it forward until the left foot is

three foot-lengths from the right, then place the left foot down and at the same time bend the left knee and inclining the body and right leg as in the preceding exercise ; at " three " sharply stretch the left knee and ankle and return to the position taken on " one " ; at " four " recover the left foot.

16. (St.-Ft.Fl.Op.-Hn.Hp.) Lung. o.

Outward lunge, left foot—place ! Recover—place !, or Feet change—place ! The position taken at the count " two " in Exercise 14 is now taken direct from the St. position. In lunging, and recovery, the body and stationary leg are kept in a straight line.

17. (St.-Ft.Fl.Op.-Hn.Hp.) Moving f. by lung. o. in zig-zag.

Advancing with outward lunge, by numbers, left foot—one ! two ! Right—one ! two ! etc. The lunging is carried out as in the preceding exercise, but in recovering, the stationary foot is brought up to the advanced foot. Later, the commands *begin !* and *stop !* are used.

18. (St.-Ln.O.-U.Bd.) Hd. Rst. and Am. bend. u.

Changing between hands on hips and arms upward bend is carried out while the lunge position is maintained.

19. (St.-Ln.O.-Hn.Hp.) Front Hl. rais.

After lunging to the left : *Left heel—raise ! Lower !* Raise the left heel as high as possible, then lower it to the ground, at the same time increasing and decreasing the bend of the left knee so as not to raise or lower the body.

20. (St.-Hn.Hp.) Toe lung. b.

Backward lunge, right toe—place ! Recover—place ! Bend the left knee outwards and at the same time raise the right leg backward, with knee and ankle well stretched, and incline the body forward, keeping body and leg in a straight line ; rest the right toe lightly on the ground. Fig. 8. In recovering, straighten the left knee, raise the body, and bring the right foot up to the left.

V. HEEL RAISING AND KNEE BENDING.

These exercises strengthen and develop the muscles and joints of the feet and legs and contribute largely to the ability to walk and run with ease and vigour, and to the correct and energetic use of the legs in jumping and vaulting. Many of them contain a strong element of balance and are thus beneficial to the general carriage of the body.

(i) *Heel Raising.*

In these exercises the heels are raised as high as possible so that the ankles are fully extended, and are then lowered steadily and quietly to the ground. The movements may be either slow or quick. The ankles must not be allowed to turn either outward or inward, and the weight of the body should therefore rest chiefly on

the balls of the big toes. Consequently, when the heels are raised from the St. position, they will become slightly separated Fig. 9. The correct movement and final position and the feel of them, are most easily learnt by taking the exercise from the St.—Ft.Cl. position and keeping the heels together. In the Asd. position the ankles are already slightly turned out, and in raising the heels from this position the weight of the body, owing to the slope of the legs, tends to thrust them still further outward and to throw the weight on to the outer toes. To prevent this, the feet should be slightly turned over on to their inner borders as the heels are raised, so that the ankle joints are straightened and the push upward is made almost entirely from the balls of the big toes.

When raising the heels, the knees must be kept well stretched and the body and head erect. The common fault is to bend in the loins and allow the hip to come forward.

When correctly performed, these exercises strengthen the joints and supporting muscles of the arches of the feet and provide a valuable means of correcting the tendency to flat foot. They also help to eliminate the common fault of standing with the weight thrown too much on the heels and too little on the fore part of the feet, which produces a slouching carriage.

21. Heel raising is taught with the commands: *Heels—raise!* *Heels—lower!* and when the movements are understood they may be repeated a specified number of times, with counting either by the teacher or by the boys themselves, e.g.: *Heel raising and lowering by numbers to ten—one! . . . ten!* or *Heel raising and lowering, counting aloud for yourselves to eleven—begin! Heels—lower!* This last method, which ends the series with heels raised, ensures good balance.

22. When the heels are raised, the balance may be tested and improved by taking head turning by numbers. In the exercise (St.) **Hl. rais. and Hd. turn. (1–5)**, the heels are raised at the count “one,” the head turned to the left at “two,” to the right at “three,” forward at “four,” and the heels are lowered at “five.” The exercise is repeated, beginning the head turning to the right. *Heel raising and head turning, by numbers to five—one! etc.*

23. The difficulty of maintaining the balance is also increased by taking the exercise with the arms stretched upward and by combining arm movements with the heel raising.

In the exercise (St.) **Quick Hl. rais. and lower. with free Am. circl.**, the heels are raised and lowered, without pausing with the heels raised, while the arms are circled as in Arm Exercise 42. The exercise can also be done slowly, care being taken, as also in Hl. rais. with Am. rais. s. and u., that the heels and arms reach their greatest height at the same time. The tendency to let the body sway backwards must be resisted.

Examples of other combinations with arm movements are :—
(St.-Rvs.Am.S.) Hl. rais. with Am. rais. u., in which there are two movements of the arms and two of the feet ; **(St.-U.Bd.) Hl. rais. with Am. stretch. u. and s.**, in which the arms make four movements while the heels are raised and lowered twice ; **(St.) Hl. rais. with Am. stretch. u. and d.**, in which the arms are bent without moving the heels, stretched upward while the heels are raised, and downward while the heels are lowered, according to the rule given on page 62. These three exercises are typical of the others.

24. (St.-Ft.F.-Hn.Hp.) Hl. rais.

In raising the heels with the feet in this position, care must be taken that the ankle of the rear foot is thoroughly stretched. The tendency is not to do this and to keep the weight of the body too much on this foot.

25. (St.-Hl.Ra.) Quick Hl. lower. and rais. in one movement.

Lower and raise the heels quickly in one movement—go ! Later :—*Lowering and raising the heels quickly in one movement, by numbers to ten—one ! etc.* At the word “go,” or at each count, the heels are lowered quickly without noise and immediately raised, then a slight pause is made before the next lowering and raising. The exercise is a good test of balance and is a valuable means of cultivating the ability to use the joints of the feet and ankles as well as those of the knees and hips in jumping and vaulting.

(ii) Heel Raising and Knee Bending.

The knee bending can be carried out either from the St.-Hl. Ra. position previously taken, or from the St. position with simultaneous heel raising, indicated by the word “*with*” printed in italics in the name of the exercise. Knee stretching in the first case restores the St.-Hl.Ra. position, in the second case the St. position with simultaneous heel lowering. In knee bending the knees are bent to a right angle, in knee full bending they are fully bent. In both cases the knees are carried outward in the direction in which the feet are pointing and the body is kept erect. Figs. 10 and 11. The tendency, especially in knee full bending, is to incline the body forward ; the remedy is to swing the hips forward, which is effected in the Kn. Fl. Bd. position by pushing the knees forward and downward. When knee bending is taken from the Asd. position the common fault is to lower the heels, whereas they should be raised still further as the knees are bent. Fig. 12. Knee full bending is not taken from the Asd. position. It should be noted that both in knee bending and in knee stretching it is the extensor muscles of the legs which execute and control the movements.

The movements are commenced either from the St., St.-Hl.Ra., St.-Asd., or St.-Asd.-Hl.Ra. position, and are carried out at a moderate speed (unless otherwise specified), or as rapidly as possible ; they may also be carried out slowly, when the difficulty of controlling

them and of preserving the balance and carriage of the body is considerably increased. They may be accompanied by arm movements, and the Kn.Bd. and Kn.Fl.Bd. positions may be retained while arm exercises are performed. A great variety of combination is thus possible, and it is easy to obtain any degree of difficulty or to choose a combination that will emphasise some particular feature, such as difficulty of balance, rhythm and timing, co-ordination of arm and leg movements, etc.

26. As small as possible, as tall as possible.

As small as possible! The boys crouch down and make themselves as small as possible without placing the hands on the ground. *As tall as possible!* They stretch up as high as they can with heels raised and arms stretched upward.

27. Sit down cross-legged and spring up to attention.

Cross-legged sitting—down! Up! The boys lift their heels, give a little jump and sit down on the ground with the legs crossed; they then grasp their feet and pull them well in to the body, pressing the knees down and keeping the back as erect as possible. They jump up to the St. position as quickly as possible. In sitting down they may at first place the hands on the ground to save a bump; later, they should be able to sit down without this aid, the bending of the knees and hips providing the needed break.

28. (St.) Skip jump, at whistle jump to Crh. posn., then change to hands on knees.

Skip jumping, and at whistle jump and crouch down—go! (Whistle) Hands on knees—place! Stand—up! From the Crouch position with the hands on floor, place the hands on the knees and take the Kn.Fl.Bd. position.

29. (St.—Hn.Hp.) Skip jump, at whistle jump to Kn. Fl. Bd. position.

Skip jumping, and at the whistle jump down to knees full bend—go! (Whistle) Stand—up!

30. Hl. rais. with Kn. fl. bend., and Hl. rais. with Kn. bend.

Younger boys, when first attempting these exercises, should be allowed to grasp the wall bars at hip height in order to eliminate the difficulty of keeping the balance, and to enable them to keep the trunk erect, e.g. :—(Fr.St.—F.Gr.) **Hl. rais. with Kn. fl. bend. (Wall bars).**

(Facing the wall bars at arms' length—ready! At hip height—grasp! Feet—close! Feet—open!) With heel raising, knees full—bend! With heel lowering, knees—stretch! And when the movements are understood: With heel raising, knee full bending, by numbers—one! two! etc. The feet are closed and opened to ensure that the feet are turned out at the proper angle. When some security of balance has been attained, the hands may be held out

and allowed to pass down and up the bars in readiness to take hold if required. The movements are made at first rather quickly, and later at a more moderate speed.

Later, the exercises are carried out with the arms by the sides and passing behind the thighs as the knees are bent, or with the hands on the hips. The commands for the movements are as given above. The movements may also be repeated rhythmically, e.g. at the commands : *With heel raising, knee bending and stretching—begin ! Stop !*

The exercises are combined with arm movements, as for example:—
(St.-Rvs.Am.S.) Hl. rais. with Kn. bend. and Am. rais. u.

With heel raising and arm raising upward, knee bending by numbers—one ! two ! At “one” bend the knees and raise the arms upward, at “two” stretch the knees and lower the arms sideways.

These combined movements can also be carried out rhythmically as explained above, e.g. : *With heel raising and arm swinging sideways and upward, quick knee bending—begin ! Stop !*

31. Hl. rais. and Kn. fl. bend., and Hl. rais. and Kn. bend.

These exercises are taught and developed on the lines described in the preceding exercises of heel raising *with* knee bending. The commands used are : *Heels—raise ! Knees—bend !*, or *Knees full—bend ! Knees—stretch !* and *Heels—lower !*, and later : *Heel raising and knee (full) bending, by numbers—one ! two ! three ! four !*, or—*Begin ! Stop !* The difficulty of the exercises is progressively increased by placing the arms in the Am.S., Nk.Rst. and Am.U. positions.

In all these exercises, unless otherwise directed, a distinct pause is made after each movement. As an example of the exceptions, the following may be given :—

(St.-Hl.Ra.) Quick Kn. fl. bend. and stretch.

Quick knee full bending and stretching—go ! Again—go ! At the word “go” the knees are quickly bent and then immediately stretched again.

In the exercise **(St.) Quick Hl. rais., Kn. bend, Kn. fl. bend., Kn. stretch., Hl. lower. (1-5)**, the movements are taken at first by numbers, and later without counting. The difficulty is to stop precisely in the Kn. Bd. position and to keep the body erect and steady throughout.

Combinations with arm movements start from any one of the leg positions, i.e. from St., St.-Hl.Ra., St.-Kn.Bd., St.-Kn.Fl.Bd., or their equivalents in the Asd. position. The following are examples of such combinations :—

(a) (St.-Hl.Ra.) Quick Kn. bend. with Am. swing. s.

(Heels—raise !) *Quick knee bending with arm swinging sideways, by numbers—one ! two !* At “one” quickly bend the knees and swing the arms sideways, at “two” quickly stretch the knees and swing the arms down to the sides with or without a slap on the legs.

(b) (St.) **Hl. rais. and Kn. bend., with Am. bend. u. and stretch. d.**

Heel raising and knee bending, with arm bending upward and stretching downward, by numbers—one! two! three! four! At "one" raise the heels and bend the arms upward, at "two" bend the knees and stretch the arms downward, at "three" stretch the knees and bend the arms upward, at "four" lower the heels and stretch the arms downward.

(c) (St.—Kn.Fl.Bd.—Rvs.Am.S.) **Quick Kn. stretch. with Am. swing. u.**

Quick knee stretching with arm swinging upward, by numbers—one! two! At "one," stretch the knees and swing the arms upward; at "two," bend the knees fully and swing the arms sideways with the palms up.

32. Arm and head exercises are carried out from the Kn. Bd. and Kn. Fl. Bd. positions, for example :—

(St.—Kn.Bd.) **Am. bend.**

(Heels—raise! Knees—bend!, or With heel raising, knees—bend!) Arm bending upward and stretching downward, by numbers—one! two! etc. (Knees—stretch! Heels—lower!)

The descriptions of the arm movements and their commands are given in the Arm Exercises.

Another variety of this form of exercise is to pass from one leg position to another, carrying out the same or a different head or arm exercise in each position, for example :—

(a) (St.—Hl.Ra.—Hn.Hp.) **Kn. bend. and Am. chang. to Hd. rst., Kn. fl. bd. and chang. to Hn. on hips., Kn. stretch., Hl. lower.**

Knees—bend! Head—rest! Knees full—bend! Hands on—hips! etc.

(b) (St.—Hn.Hp.) **Hl. rais. and Hd. turn., Kn. fl. bend. and Nk. rest and Hn. on hips.**

Heels—raise! Head turning by numbers—one! two! three! four! Knees full—bend! Neck—rest! Hands on—hips! Knees—stretch! Heels—lower!

(c) (St.—Asd.—Hl.Ra.—Rvs.Am.S.) **Quick Kn. bend., Am. swing. u., Kn. stretch., Am. swing. s. (T.C.1-4).**

Quick knee bending, arm swinging upward, knee stretching, and arm swinging sideways, by numbers—one! two! three! four! Repeat—etc.

33. (St.—Asd.—Kn.Bd.—Hn.Hp.) **Hl. lower. and raise.**

Heels—lower! Heels—raise! Lower and raise the heels slowly without lowering or raising the body or allowing the hips to go backward or forward. The heels must be raised as high as possible.

34. (St.—Kn.Bd.—Hn.Hp.) Skip jump, at whistle jump to Kn. Fl. Bd. posn.

(Knees—bend!) Skip jumping, and at the whistle jump and take knees full bend—go! (whistle). Knees—stretch! Heels—lower! The skip jumping is done chiefly from the ankles, with little straightening of the knees. In the jump to the Kn. Fl. Bd. position the body should land erect and in full balance.

35. (St.—Hl.Ra.) Kn. fl. bend. with a jump.

(Heels—raise!) With a jump, knees full—bend! Knees—stretch! Heels—lower! Bend the knees slightly and take a small jump and land with the knees fully bent and with the body erect and in full balance.

36. (St.—Kn.Fl.Bd.) Jump to St.—Asd.—Hl. Ra. posn. with Am. bend. u. or swing. m.

(With heel raising, knees full—bend!) Jumping astride on the toes with arm bending upward (arm swinging midway), by numbers—one! two! And later: Five times—begin! Spring from one position to the other, bending the arms upward or swinging them midway on the upward jump and bringing the hands to hips on the downward jump. The number of jumps may be gradually increased.

37. (St.—Crh.) 1 Lg. stretch. s.

Leg stretching sideways, left and right (right and left), by numbers—one! two! three! four! At “one,” stretch the left (right) leg directly sideways without raising the body; at “two,” bring the leg back to its former position; at “three” and “four,” repeat with the right (left) leg. Fig. 13.

Later: Left leg sideways—stretch! Leg changing by numbers—one! two! etc. Right leg—bend! At “one,” make a slight spring with the right leg, bring the left leg back to its original position and throw the right leg out sideways; at “two,” reverse the position again.

Both legs can be stretched and bent at the same time at the commands: *Both legs stretching sideways by numbers—one! two! etc.* The legs should be stretched as widely apart and the back kept as low as possible. Fig. 14.

38. (Fr.St.—Asd.—Hl.Ra.—F.Gr.) 1. Kn. bend. (Wall bars or beam).

Grasp a wall bar or beam between shoulder and waist height. The feet must be fully two foot-lengths apart. *Single knee bending, left and right (right and left), by numbers—one! two! three! four!* At “one,” bend the left knee, keeping the body erect, the right leg straight and both heels well raised; at “two,” straighten the left knee; at “three” and “four,” bend and straighten the right knee.

The exercise is carried out later with the hands on the hips. Fig. 15.

39. (St.-Asd.-Hl.Ra.-1 Kn.Bd.-Hn.Hp.) Alt. Kn. bend. (1-2).

The starting position is taken by bending the left knee as in the preceding exercise. *Alternate knee bending, by numbers—one! two!* At "one," the left knee is stretched and as soon as it is straight the right knee is bent; at "two," the right knee is straightened and the left bent, and so on. The body, kept erect, is carried from one side to the other in a continuous movement.

40. (Fr.St.-Wd.Asd.-1 Kn.Fl.Bd.-F.Gr.) Alt. Kn. fl. bend.

Stand with the feet wide astride and lightly grasp a bar about waist height, then bend the left knee fully, keeping the body erect and the right leg straight, and allowing the right foot to turn over on its inner border. *Alternate knee full bending—begin! Stop!* The movements are continuous from side to side, as in the preceding exercise. The S.P. can also be taken with the boys in a file with their hands on one another's shoulders. Fig. 16.

Later, the exercise is carried out with the hands on the hips.

Single knee bending can also be taken from the St.-Wd.Asd. position in four counts, with a pause after each movement, and in this form it can be combined with arm movements, such as arm stretching sideways.

41. (St.-Kn.Bd.-Am.C.) Quick Kn. stretch., with Am. swing. m.

(*With heel raising, knees—bend! Arms in front—cross!*) *Quick knee stretching with arm swinging midway, by numbers—one! two!* At "one," quickly straighten the knees and swing the arms midway, then without pause bend the knees and swing the arms across the body again. The movements are carried out rhythmically, the counting being used merely to set and control the rhythm. In the knee stretching the lift should be sufficiently vigorous to carry the body up on to the tips of the toes. Fig. 17.

42. (St.-1 Kn.Fl.Bd.-1 Lg.F.-F.Gr.) Hop, with alt. Lg. stretch. f.

Stand facing a beam or sideways to the wall bars and grasp at waist height. (*Knees full—bend! Left leg forward—stretch!*) *Hopping with alternate leg stretching forward—begin! Stop!* In the S.P. the left leg is stretched forward with the heel resting on the ground. In the exercise a little hop is made on the bent leg, which is then quickly stretched forward while the other is brought back to support the body, and so on. Fig. 18.



Fig. 1.



Fig. 2.



Fig. 3.

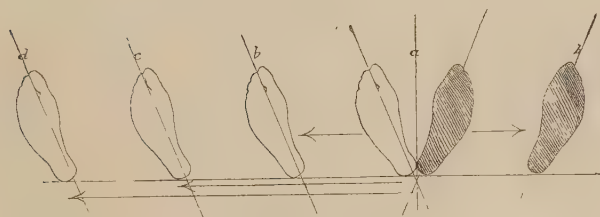


Fig. 4.



Fig. 5.

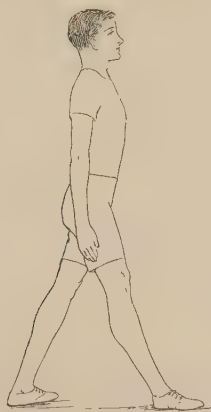


Fig. 6.



Fig. 7.



Fig. 8.

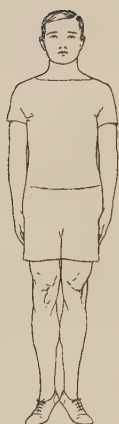


Fig. 9.



Fig. 10.



Fig. 11.



Fig. 12.



Fig. 13.

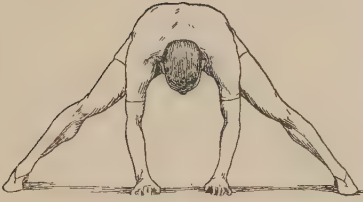


Fig. 14.



Fig. 15.



Fig. 16.

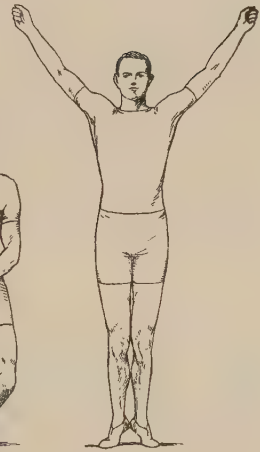


Fig. 17.

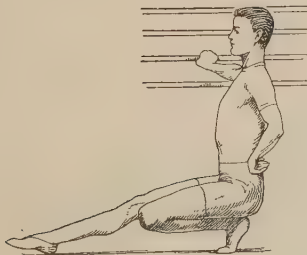


Fig. 18.

CHAPTER VI. ARM EXERCISES.

For want of sufficient exercise or from faulty postural habits, the muscles which connect the arms and shoulders with the back of the trunk are often relatively weak and allow the shoulders to fall forward, with the result that the chest is flattened. The Arm Exercises, by strengthening these muscles and enabling them to hold the shoulders in a correct position, are an effective means of preserving or restoring the normal carriage of the chest. The vigorous use of the arms occasioned by these exercises promotes the development of the chest, improves its general flexibility, and increases the power of inspiration. The large excursions of the chest walls in the performance of these exercises, especially in raising the arms sideways or above the head, augment the respiratory exchanges and the general ventilation of the body, and have a stimulating effect upon the circulation. The Arm Exercises, therefore, contribute largely to health and vitality. They also strengthen the muscles and joints of the arms themselves and cultivate the power of co-ordination.

In this group are included the various positions of the arms used in the starting positions for other exercises. Arm movements are also used in combination with the exercises of other groups, especially with the Dorsal, the Abdominal and the Lateral Exercises. It is therefore important that the Arm Exercises should be well and frequently practised.

I. ARM POSITIONS.

For the sake of convenience, these positions of the arms, though for the most part involving movements similar to those used in the definite arm exercises, are placed together in a separate sub-group. Repetition of the movements for taking some of these positions is frequently employed as an exercise in itself, either alone or in combination with movements of other parts of the body. Definitions of the positions are given in the chapter on Terminology.

1. (St.) Hn. Hp. posn.

Hands on—hips! Lightly close the hands and rest the backs of the fingers on the sides of the hips. *Hands—down!* Extend the arms by the side.

The position is used for the purpose of keeping the hands out of the way during the performance of an exercise.

2. (St.) Low Hn. Hp. posn.

Hands low on—hips! *Hands—down!* Separate the thumbs and fingers and rest the forks of the hands, fingers forward on the projecting knobs of the thigh bones (the Great Torchanters). The position is used for the purpose of keeping the hands out of the way during the performance of an exercise.

3. (St.) Clp. posn.

Hands—clasp! Hands—down! Hook the bent fingers of both hands together ("butcher's hook") in front of the body, forearms horizontal and touching the body, the upper arms hanging naturally. The shoulders must not be brought forward. The position is used for the purpose of keeping the hands out of the way during the performance of an exercise.

4. (St.—Asd.) Hn. Th. posn.

This is the starting position of the hands for the exercise Head pressing backward. *Hands on thighs—place! Hands—back!* Bend the wrists forward and slide the fingers round the legs until their tips rest against the front of the thighs, the fingers pointing diagonally downward; the elbows slightly bent, but not brought forward. The arms are loosely extended until they are required to pull upon the thighs while the head is pressed back. Fig. 19.

5. (St.) Am. B. posn.

Arms backward—raise! Arms—lower! Raise the arms backward as far as possible, keeping the body quite straight and stretching the arms backward. Lower the arms to the sides. Fig. 20.

6. (St.) Am. B. Clp. posn.

Arms backward—raise! Hands—clasp! Arms—lower! Raise the arms backward and clasp the fingers of one hand in the palm of the other. Keep the arms well stretched.

7. (St.) Am. S. posn. [(St.) Am. rais. s.]

Arms sideways—raise! Arms downward—lower! Raise the arms sideways at a moderate speed until they are horizontal and a little behind the line of the shoulders, arms and hands well stretched, the palms of the hands downwards and the fingers and thumbs close together. Fig. 21.

The Rvs. Am. S. position is taken by turning the palms of the hands upwards, at the command: *Hands—turn!* Or by turning the hands as the arms are raised sideways: *With palms up, arms sideways—raise!* [(St.) Am. rais. s. with palms up.]

8. (St.) Am. U. posn.

Arms above the head—up! Arms—down! Carry the hands straight upward until the arms are stretched to their fullest extent vertically upward (as viewed both from the front and from the side), with the palms of the hands turned towards each other. Fig. 22. Carry the hands straight downward until the arms are again extended by the side. The first practice of the position should be done in this way. The position can also be taken in several other ways, e.g. by raising the arms sideways and upward, by stretching the arms upward, etc.

9. (St.) Am. M. posn. [(St.) Am. rais. m.]

Arms midway—raise! Arms downward—lower! Raise the arms sideways and upward to a position midway between the Am. S. and the Am. U. positions, holding them well back and with the palms of the hands upward. Lower the arms sideways and downward. Fig. 23.

10. (St.) Am. F. posn. [(St.) Am. rais. f.]

Arms forward—raise! Arms downward—lower! Raise the arms forward until they are horizontal, with the palms of the hands turned towards each other and the width of the shoulders apart. Keep the body erect and stretch the arms well forward. Fig. 24.

11. (St.) Am. C. posn.

The arms in front—cross! Hands—back! Bring the arms across the front of the body and cross them just above the wrists. The arms hang loosely with the elbows slightly bent, and the hands are partly closed. Fig. 25.

12. (St.—Asd.) Am. D.—Tr. F. posn.

With arms loose, trunk forward—bend! Trunk upward—stretch! Bend the trunk forward and allow the arms to hang down loosely from the shoulders, with the hands partly closed. Fig. 26.

13. (St.) Hd. Rst. posn.

For teaching this position, place the arms in the Rvs. Am. S. position, then command: *Head—rest! Arms sideways—stretch!* Bend the elbows and bring the finger-tips together on the top of the head, keeping the wrists and fingers as straight as possible, the elbows pressed well back, and the head erect. Later, the position is taken directly from the St. position on the commands: *Head—rest! Hands—down!* Fig. 27.

14. (St.) Nk. Rst. posn.

Neck—rest! Hands—down! Without moving the head or body, raise the hands and place the tips of the fingers at the back of the head, if possible touching the opposite fingers. Keep the wrists and fingers straight and press the elbows back. The head must not be pushed forward or the back rounded. Fig. 28. The position may be taught from the Rvs. Am. S. position, as in the preceding exercise.

15. (St.) U. Bd. posn.

Arms—bend! Arms downward—stretch! Bend the elbows and wrists and bring the backs of the fingers in contact with or as close as possible to the outside of the shoulders, the wrists and hands being in the line of the shoulders; press the elbows into the sides. Fig. 29. The position may be taught from the Rvs. Am. D. position by bending the elbows slowly until the position is taken. *Hands*

outward—turn! Slowly, arms—bend! Arms—stretch! Bend! etc. Later, arm bending upward and stretching downward can be taken as an exercise, by numbers, or with the class counting to 10.

16. (St.) Ac. Bd. posn.

Arms across—bend! Hands—down! Raise and bend the arms until the elbows and hands are level with the shoulders, the elbows sideways and pressed well back, the hands in front of the shoulders with the palms downward. The elbows are fully bent, and the wrists and fingers are stretched in line with the forearms. Fig. 30. The position can be taught from the Am.S. position with the commands: *Arms across—bend! Arms sideways—stretch!* the movement taking place in the elbow only.

17. (St.) Ac. Bd. Clp. posn.

With hands clasped, arms across—bend! Hands—down! The Ac. Bd. position is taken with the elbows sufficiently far forward to allow the bent fingers of the hands to be hooked together. Fig. 31.

18. (St.) F. Bd. posn.

Arms forward—bend! Hands—down! Raise and bend the arms until the upper-arms are horizontal with the elbows forward, the forearms crossed one over the other, with one hand over and the other under the opposite upper-arm. The hands are lightly closed. Keep the back straight. Fig. 32.

II. ARM STRETCHING AND PUNCHING.

(a) *Arm Stretching.*

In teaching these exercises it is necessary to have the movements made rather slowly in order to ensure (i) that they are accurate as to form and direction; (ii) that they are carried out to the fullest extent permitted by the joints concerned; and (iii) that when the limit of movement has been reached the effort, whether of stretching or bending, is still fully maintained. Later, unless otherwise directed, the separate movements are carried out with the greatest possible speed and vigour, with a definite pause after each movement.

19. (St.-U.Bd.) Am. stretch. m.

This is an example of the simplest form of arm stretching, i.e., in one direction only. It starts from the U. Bd. position, and consists in stretching the arms in the named direction to the position described in Exercise 9, and then bending them again. Its development and subsequent combination with arm stretching in other directions are described below, and the same method is employed in the case of arm stretching downward, sideways, upward and forward.

When the exercise is being taught, the commands used are:—*Arms midway (upward, etc.)—stretch! Arms—bend!*, and as soon as the movements are understood, with the addition of: *Repeat*

by numbers—one! two! etc. When, after a little practice, the form is sufficiently correct to permit of an increase of speed, the commands used are: *Arm stretching midway, by numbers—one! two! one! etc.* This is the normal way of commanding all arm stretching, whether in one or more directions, until the boys are able to count for themselves or to perform the exercises without the assistance of counting.

The teacher should usually count in an even rhythm, but in order to prevent the movements from becoming automatic he should vary the speed of the counting from practice to practice. He may occasionally vary the intervals between the counts in an unexpected way in order to keep the class alert and in purposeful control of their movements; or a definite exercise with these objects in view may be given in the form of quick arm stretching midway and slow arm bending, or vice versa. *Quick arm stretching midway and slow arm bending, by numbers—one! two! etc.*

The cultivation of the boys' own sense and control of rhythm may be commenced very early in the training by requiring the boys to count aloud for themselves, the commands used being: *Arm stretching midway, the class counting aloud to ten—begin!* When the rhythm has been fairly established in this way, the counting aloud may be discontinued. The exercise is then carried out at the command: *Arm stretching midway to ten—begin*, or *Arm stretching midway—begin! Stop!* But even at this later stage of the training the teacher himself should frequently count in order to keep control of the speed, force and rhythm.

The first combination is with arm stretching downward: *Arm stretching midway and downward, by numbers—one! two! three! four!* This combination, and in fact all combinations which include arm stretching downward, can be started from the St. position instead of from the St.-U.Bd. position, the first movement of the series being arm bending upwards and the last arm stretching downward, e.g. (St.) **Am. stretch. m. and d.**, which is carried out with the same commands as those given above. Later, two, three or four directions can be combined, the numbers counted being increased according to the number of movements in the series. The stretching movements may be quick and the bending movements slow, or vice versa; and the arms may be stretched two or three times in each direction in turn, e.g.: *Arm stretching midway and downward, twice in each direction, by numbers—one! two! . . . eight!* For these combinations, as for the simple arm stretching in one direction, the rhythm of the teacher's counting may be varied in speed or broken, the boys may count aloud for themselves, or the exercises may be performed without counting.

20. (St.-U.Bd.) **Slow Am. stretch. u.** ("pushing and pulling").

Slow arm stretching upward by numbers, pushing and pulling—one! two! etc. This is a special form of arm stretching in which the movements are quite slow and are made as though pushing up and

pulling down against resistance ; i.e. the antagonistic muscles are brought strongly into play and all the muscles of the arms are vigorously exercised, while the slow speed and the intense " purpose " of the movements ensure that they are carried out to the utmost limit.

21. (St.-U.Bd.) 1 Am. stretch. u. or s.

Each arm separately is stretched in the named direction and again bent. *Left arm upward—stretch! Arm—bend! Right arm upward—stretch! etc.* Later, *Single arm stretching upward, by numbers, beginning with the left—one! two! three! four! etc.* The difficulty is to stretch the arm exactly in the right direction.

22. (St.-U.Bd.) Alt. Am. stretch. u. and d.

The arms are stretched simultaneously, one upwards, the other downward ; they are then bent.

The arms can also be stretched in two other directions, e.g. upward and midway, forward and sideways. The difficulty experienced in the preceding exercise of moving the arms in exactly the right directions is here much accentuated. The purpose of this type of exercise is to cultivate muscular control. *Left arm upward, right arm downward—stretch! Arms—bend! Left arm downward, right arm upward—stretch! Arms—bend! etc.* Later, after the initial stretching, the positions of the arms are reversed at the commands : *Arms change, by numbers—one! two!* At " one " the arms are bent ; at " two " they are stretched in the reverse order ; later still, the arm changing can be repeated any number of times at the commands : *Arms changing by numbers—one! two! one! etc.* Or : *Arm changing—begin! Stop!* The counting can be varied as in the symmetrical arm stretching (see Exercise 19).

23. (St.-Ac.Bd.) Am. stretch. f.

Arm stretching forward, by numbers—one! two! At " one " stretch the arms forward to the position described in Exercise 10, and at " two " bend them across. Keep the back straight.

Later, the exercise can be carried out with slow stretching and quick bending at the commands : *Slow arm stretching forward and quick arm bending, by numbers—one! two!*

24. (Hz.Knl.) Am. bend.

On the hands and knees—down! Slowly, arms—bend! Arms—stretch! At " one," bend the arms with the elbows sideways until the forehead touches the ground between the hands ; at " two," stretch the arms.

Later, the exercise can be done in the Bt.Fr.Sup.-Asd. position (see Abdominal Exercises, No. 47), which is taken from the Hz. Knl. position by straightening the knees and separating the feet widely with a jump. Fig. 33.

25. (Hi.Fr.Sup.) Am. bend. (Bench, beam).

See Abdominal Exercise 56.

26. (Fr.St.—Asd.) Rhyth. fall. f. (Wall bars).

Stand facing the wall bars at such a distance that when the body has fallen forward and the hands have grasped the named bar, the arms are at right angles to the body. The proper distance is quickly learnt. The bar used at first should be at chest height and later a lower bar may be used, but not one below hip height. *Falling forward and pushing back—begin! Stop!* Keep the whole body stiff and let it fall forward from the ankles; raise the arms and, after grasping the named bar, allow them to bend slightly so as to bring the body to rest without a shock; then immediately straighten the arms vigorously, pushing from the bar and releasing the grasp, so that the body rises again nearly to the erect position, but with sufficient tilt to cause it to fall forward again, and so on.

27. (Pn.Ly.—Asd.—Fh.Rst.) Am. stretch.

With the forehead on the hands and the feet apart, lie—down! Arms—stretch! Arms—bend! Lie face downward with the opposite finger tips touching and the forehead resting on them, the elbows carried out sideways and the feet apart. Stretch and bend the arms keeping the body and legs in a straight line. Compare Abdominal Exercise 56.

(b) *Arm Punching.*

28. (St.—U.Bd.Clen.) Alt. Am. punch. f. or u.

For punching, arms—bend! The elbows are bent and carried back a little, the fists are clenched. *Alternate arm punching forward (upward)—begin! Stop!* Free movements. Punch forward (or upward) as hard as possible with the left hand, then withdraw it and at the same time punch with the right hand, and so on. The shoulders should not be swung about too much and the back should be kept straight. In punching upward the head should be carried back and the eyes directed to the hand which is above the head. The punches should not follow each other too quickly; the purpose should be to “drive each punch well home.”

29. (St.—U.Bd.Clen.) 2 Am. punch. u. or f.

The S.P. is taken as in the preceding exercise. *Both arms punching upward (forward)—begin! Stop!* As in the preceding exercise, but both arms punch at the same time.

III. ARM SWINGING.

With a few exceptions, the movements in these exercises consist in rapidly swinging the arms, kept fully stretched, in named directions from one definite arm position (as described in Sub-group I) to another, and back again to the first position, while the remainder of the body is held as still as possible. For the most part the form and

direction of the movements are taught first in the corresponding slow arm raising exercises of the next sub-group, which should be consulted for these details.

30. In nearly all cases the name of the exercise sufficiently indicates the movements to be carried out and the wording to be employed in the descriptive part of the command. Numbers can be used as executive words for a series of movements, and the word "*Swing!*" for a single movement. For example, the commands for the exercise **(St.) Am. swing. s.** are: *Arms sideways—swing! Arms downward—swing!* And later: *Arm swinging sideways and downward, by numbers—one! two! etc.*, and for the exercise **(St.-Am.S.) Am. swing. d. with slap on legs and s. (1 movement)**, they are: *(Arms sideways—swing!) Arm swinging downward with a slap and up again—swing! Again—swing! etc.*

When the hands are clapped together at the end of an upward or forward swing, they are immediately separated to the width of the shoulders, where they remain, if the movement is not a continuous one, until a further command is given.

The chief fault in swinging the arms forward and upward is to bend the loins and push the hips forward, and in swinging them backward to raise the shoulders and round the back. The corrective is to keep the back well stretched and the head erect, and to bring the weight of the body forward on to the fore part of the feet.

31. (St.-Rvs.Am.S.) Am. swing. f. with palms up.

(With palms up, arms sideways—swing!) *Arm swinging forward with palms up, by numbers—one! two!* Keep the palms up and the arms horizontal throughout. This may also be used as a free exercise, each boy working in his own time, making no pauses between the movements and emphasising the sideways swings. The back must be kept very straight.

32. In arm changing with the arms in different positions, both arms move at the same time and take up each other's former position, e.g. **(St.-1 Am.U.) Am. chang. with f. swing**, which is carried out on the commands: *(Left arm forward and upward—swing!)* *With a forward swing, arms—change!* or *Changing with a forward swing, by numbers—one! two! etc.*

A step forward with one foot may be taken at each change of the arms. These unsymmetrical movements require a good deal more muscular control than is needed in the symmetrical arm swingings.

33. (St.-Asd.-F.Bd.) Rhyth. Am. swing. s. (later, with Hl. rais. and slight Tr. lean. f.).

Arm swinging sideways—begin! Stop! This is a continuous and rhythmic swing between the F. Bd. and the Am. S. positions, with the hands loosely closed. Taken easily at first, the movements are

later made with more vigour, and as the arms are swung sideways the heels can be raised and the trunk inclined a little forward, the heels being lowered and the trunk raised as the arms are bent forward.

34. (St.-Asd.-F.Bd.) Rhyth. El. and Am. swing. s.

Elbow and arm swinging sideways—begin! Stop! This is a continuous rhythmic swinging sideways alternately of the elbows and arms. First the elbows, kept well bent, are swung as far back as possible and in the rebound are carried forward again to the F. Bd. position, then the arms are swung sideways to the Am. S. position and back again to the F. Bd. position, and so on. Put as much energy as possible into the sideways swings.

35. (St.-Am.C.) Rhyth. Am. swing. m. (later with Hl. rais.).

(The arms in front—cross!) Arm swinging to midway—begin! Stop! A continuous easy rhythmic swing, with a gradual increase of energy, especially in the upward swings, which can be accompanied later by heel raising. Stretch the back strongly at each upward swing of the arms and relax a little as the arms cross again in front of the body.

36. (St.) Rhyth. Am. swing. f., d. and s. (later with chang. to Alt. Am. swing. (also with Hl. rais. with Kn. bend.).

Arm swinging forward, downward and sideways—begin! Stop! A continuous easy rhythmic swing. Keep the arms loose and the hands partly closed, swing the arms forward and then let them fall, and as they come to the sides swing them sideways, then let them fall again and swing them forward, and so on. The hands lightly brush against the thighs as they swing from sideways to forward, and vice versa. Later, start by swinging one arm forward and the other sideways. *Alternate arm, swinging forward, downward and sideways—begin!* Later still, a change can be made between arm swinging and alternate arm swinging; the command: *Change!*—being given as the arms swing forward. The left arm is then held still while the right arm is swung down and up sideways and then the left arm joins in again.

The heels can be raised as the arms swing up and lowered as the arms swing down. Later, the knees can be bent as the heels are raised, and straightened as the heels are lowered.

IV. ARM RAISING, CIRCLING AND TURNING.

37. (St.) Am. turn. o.

Hands outward—turn! Inward—turn!

Turn the palms of the hands forward and outward as far as possible, keeping the arms straight and allowing them to come slightly away from the sides. Do not allow the hands to come forward. Then turn the palms inwards again. Later, breathe in deeply as the hands are turned out, and breathe out as they are turned in. Fig. 34.

38. (St.-Am.U.) Am. part.

(St.-Rvs.Am.S.) Am. rais. u.

In both of these exercises the arms are raised and lowered between the Am. U. and the Rvs. Am. S. positions. In the first they start from the Am.U. position on the command: *Arm parting by numbers—one! two!* In the second they start from the Rvs. Am. S. position on the command: *Arm raising upward—one! two!* At "one" the arms are parted (or raised); at "two" they are raised (or lowered).

39. (St.) Am. rais. s. and u.

Arms sideways and upward—raise! Arms sideways and downward—lower! Later: *Arm raising sideways and upward, by numbers—one! two!* Raise the arms with a fairly slow continuous movement, turning the palms of the hands upwards as the arms pass the Am. S. position. Lower them in the same way, turning the palms down.

40. (St.) Am. rais. f. and u., lower s. and d.

Arms forward and upward—raise! Arms sideways and downward—lower! Later: *Arm raising forward and upward, lowering sideways and downward, by numbers—one! two!* Raise the arms forward and upward and stretch up as high as possible; lower the arms as in the preceding exercise.

41. (St.) El. circl.

Elbow circling—ready! Begin! Stop! Raise the arms sideways with the elbows loosely bent, the hands forward and partly closed. Carry the elbows round, in large circles, forward, upward and downward. No precision is required.

42. (St.) Free Am. circl.

Free arm circling, slowly (quickly)—begin! Stop! Carry the arms forward, upward, sideways and downward in large circles.

43. (St.-Am.S.) Am. circl. spirally.

Arm circling, small to large—begin! Stop! Carry the arms forward, upward and downward in circles, small at first and gradually enlarged until the arms are circling as in the preceding exercise.

44. (St.-Asd.-Clen.) Quick 1 Am. circl. b.

Free exercise. This is a bowling action, done with a loose arm.

45. (St.-Ln.O.-Hn.Kn.) Quick 1 Am. circl. b.

This is similar to the preceding exercise, except that for swinging the right arm the position of outward lunge is taken with the left foot and the left hand is placed on the bent knee, and vice versa for the left arm swing. Fig. 35.

V. ARM FLINGING.

46. The elbows are bent and extended between the Am. S. and Ac. Bd. positions, the exercise starting from either position. The movements are made as quickly as possible. The elbows must be kept back and at the level of the shoulders. The hands may be clenched or extended.

The commands are : *Arm flinging, by numbers—one ! two !* At "one," the elbows are bent (or extended), at "two" they are extended (or bent). From the Am. S. position the bending and stretching may be done without a pause between them, the command being : *Arm flinging, in and out in one movement—go !* [*Twice, etc.—go !*]



Fig. 19.



Fig. 20.

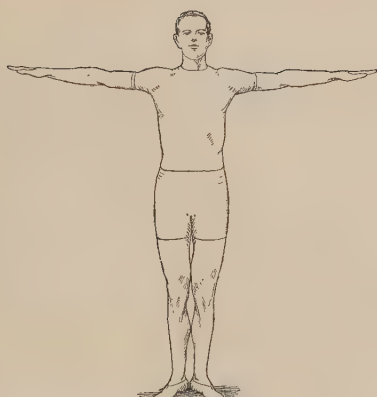


Fig. 21.



Fig. 22.

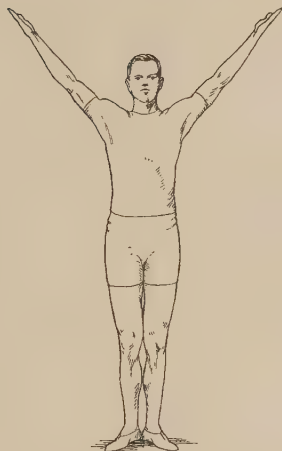


Fig. 23.



Fig. 24.



Fig. 25.



Fig. 26.



Fig. 27.



Fig. 28.



Fig. 29.



Fig. 30.



Fig. 31.



Fig. 32.



Fig. 33.

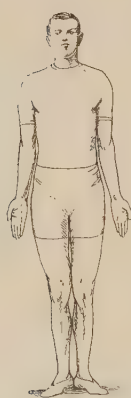


Fig. 34.



Fig. 35.

CHAPTER VII.

DORSAL EXERCISES.

The Dorsal Exercises employ chiefly the muscles of the back and neck, which keep the body and head erect and when suitably trained and developed, as by these exercises, give the habit of an erect and easy carriage. The carriage of the chest, which is of so much importance for the health and vigour of the body, depends to a very great extent upon that of the back and head; the shoulders, however, have their part to play in this matter, as explained in the Arm Exercises, and for this reason the Dorsal Exercises include many arm movements which help to set the shoulders in the right posture. The description of these arm movements is given in the Arm Exercises.

The exercise "Trunk bending downward" which appears in this group is really an abdominal exercise; but it is included amongst the Dorsal Exercises because it is nearly always combined with movements proper to these exercises, and because, by securing the complete contraction of the chest, it is complementary to those exercises of the Dorsal group which secure its complete expansion. Taken together these exercises are of primary importance for the flexibility and the range of movement of the chest, and, therefore, for the power and the amplitude of respiration.

Head pressing backward is one of the most important exercises for securing the flexibility of the dorsal part of the spine and the full expansion of the upper part of the chest. It should, therefore, be assiduously practised throughout the boys' training. Few lessons should omit it.

I. HEAD EXERCISES.

These exercises give flexibility to the neck and strengthen the muscles which support the head and, when the head is held correctly, the upper part of the chest.

1. (St.-Clp.) Hd. turn.

Head to the left (right)—turn! Head forward—turn! Head to the right (left)—turn! Head forward—turn!, and when the movements are understood: *Head turning by numbers—one! two! three! four!* Keep the shoulders still and turn the head round as far as possible, pushing the chin as far behind the shoulder as it will go. The chin should not be drawn in tightly but it must not be allowed to stick out, and the head must be kept upright and not inclined backward. Fig. 36. The Clp. position is taken because the shoulders are not then so likely to be held down stiffly as when the arms are by the sides; a little looseness in the shoulders allows the head to be turned more freely.

The movements are made at a moderate speed. They may also be made quickly, either as described above, or from side to side at the commands: *Quick head turning from side to side, to the left—one! To the right—two! Repeat—one! two! etc. Head forward—three!*, or *Quick head turning from side to side, by numbers, to the left first—one! two! etc. Head forward—three!*

2. (St.) Hd. drop. f. and stretch. u.

Head forward—drop! Head upward—stretch! Keep the back straight and let the head drop forward with the chin on the chest. Draw the chin tightly in and stretch the head strongly upward. When the movements are understood they may be repeated several times, each boy taking his own time, at the commands: *Head dropping forward and stretching upward—begin! Stop! Fig. 37.*

3. (St.) Hd. bend. f.

Head forward—bend! Head upward—stretch! Tilt the head forward, drawing the chin tightly in and pressing the neck backward. Keep the back straight. Fig. 38. Keep the chin in and stretch the head strongly upward. When the movements are understood they may be repeated several times, each boy taking his own time, at the commands: *Head bending forward and stretching upward—begin! Stop!*

4. (St.) Hd. drop. b. and stretch. u.

Head backward—drop! Head upward—stretch! Let the head drop backward with the chin in the air. Fig. 39. Draw the chin in tightly and stretch the head strongly upward. When the movements are understood they may be repeated several times, each boy taking his own time, at the commands: *Head dropping backward and stretching upward—begin! Stop!*

5. (St.—Clp.) Hd. bend. s.

Head to the left (right)—bend! Head upward—stretch! Keep the eyes directed on some object in front and at their own level (this helps to prevent the head turning as well as bending to the side), bend the head directly sideways as far as possible ("try to lay the ear upon the shoulder"). Stretch the head upward again. The shoulders must be kept still and not be allowed to sway sideways with the head, but they should not be drawn down. The neck can be bent sideways more freely if the shoulders are lifted a little and the Clp. position is taken to permit of this. Fig. 40.

6. (St.—Asd.) Hn. Th. posn.

See Arm Exercises No. 4.

7. (St.—Asd.—Hn.Th.) Bk. stretch. with arm-pull.

Breathing with pressing—begin! Stop!

Stretch the back strongly, carrying the head as high as possible and lifting the chest forward and upward, assisting these movements

by pulling backward on the thighs. Take a deep breath as this is done. Then relax the pressure of the hands on the thighs, let the chest fall, and breathe out.

8. (St.-Asd.-Hn.Th.) Hd. press. b.

Head backward—press! Head upward—stretch! and when the movements are understood: *Head pressing backward by numbers—one! two! etc.* Pull with the arms and stretch the back as in the preceding exercise, but also press the head backward as far as possible with the chin a *little* drawn in. Fig. 41. Then stretch the head upward, at the same time relaxing the pressure of the hands and allowing the chest to fall. The movements are carried out at a moderate speed. In pressing the head backward the body must not be allowed to sway backwards in the loins. This will not occur if the preceding exercise has been well practised. The kind of suggestion which helps boys to understand what to do is to tell them to push the head and the chest away from *each other* as far as they can, the chest forward, the head backward.

Later, the movements may be repeated a number of times (Rhyth. Hd.press.b.) each boy taking his own time, at the commands: *Head pressing backward—begin! Stop!*

When the exercise has been thoroughly learnt, it may occasionally be carried out with the hands by the sides, or with arm turning outward (see Arm Exercise 37), or with the arms stretched sideways and turning the palms of the hands upward as the head is pressed back, and downward as the head is stretched up: *Head pressing backward with hand turning—begin! Stop!*

II. TRUNK BENDING FORWARD AND TRUNK BENDING DOWNWARD IN THE St., SIT. AND KNL.SIT. POSITIONS.

(a) *Trunk Bending Forward.*

In trunk bending forward the back is kept straight or may be given a little extra extension, and the trunk is inclined forward, by movements in the hip joints, as far as is possible without bending the knees, i.e. until the hamstring muscles are fully stretched. In the St. position the knees must be kept firmly stretched. The movements are carried out at the commands: *Trunk forward—bend! Trunk upward—stretch! Trunk bending forward by numbers—one! two!* When the trunk is inclined forward in this way, whether from the St. position or from the Pn. Ly. or Toe Ln. positions, it is supported by the extensor muscles of the spine, the thick bundles of muscles which extend along each side of the spine from the hips to the head. These muscles are strengthened, and as they become accustomed, through the practice of these exercises, to hold the back straight when at considerable disadvantage in the matter of leverage, will do so all the more easily in the erect position. The leverage may be progressively increased by

placing the arms in higher positions before bending the trunk forward. The severity of the exercise may also be increased by combining arm movements with the trunk movements, and by holding the trunk inclined forward while performing a head or arm exercise.

Trunk bending downward has a two-fold purpose : (1) To exercise the abdominal muscles, and (2) to secure a complete flexion of the dorsal spine and contraction of the chest, accompanied by a complete extension of all the spinal muscles. The downward movement begins with the head, and the bending is carried down the back until the back is completely rounded and the head is brought as low down and as close to the legs as possible. The effort to get the head close to the legs may be assisted by grasping the legs and pulling with the arms. The knees must be kept firmly stretched. The commands for the movements are : *Trunk downward—bend ! Trunk upward—stretch !* To a certain point in the movement no muscular effort is required, the body is allowed to go limp and to descend by its own weight. But as soon as the muscles and other soft parts of the back are extended, it requires a strong contraction of the abdominal muscles to stretch them further and to pull the body down against their elastic resistance. The less the hips can tilt forward with the movement, the sooner the point of effort is reached. The amount of tilt is greatest in the Asd. position, less in the St. position, and least in the Ft.F. position. These positions are therefore employed in this order to obtain a progressive increase of difficulty in the exercise. Further, the full flexion of the dorsal spine and contraction of the chest can not be obtained unless the breath is completely expelled. The movement, therefore, should be accompanied by a deep expiration. But this makes it necessary that the bent position should not be held for any length of time. Only a brief pause should be made in it before the body is straightened up, which should be accompanied by a deep inspiration. The movement of bending and stretching should, as a rule, be moderately fast, though the bending down may also be done quite rapidly.

Rhythmic trunk pressing downward in the Tr. D. position consists in a succession of strong efforts to bend the trunk still further down, each effort being followed by a slight relaxation of the abdominal muscles which allows the body to rebound ; in this way a rhythmic swaying of the body is set up which assists the efforts to bend the body down. The commands for the exercise are : *Trunk pressing downward—begin ! Stop !*

Trunk stretching forward from the Tr. D. position may be carried out, the trunk being stretched to the position reached by bending the trunk forward from the St. position. The movement is begun by lifting the head, and the back is straightened as soon as possible. The commands for the exercise are : *Trunk forward—stretch ! Trunk downward—bend !*

9. Trunk bending forward is taken in its simplest and easiest form in the exercise (St.—Asd.—Hn.Hp.) Tr.bend.f. The commands for

this exercise and the method of carrying it out are given above. The exercise may be made progressively more difficult by taking the following positions with the feet :—St., Ft.Cl. and Ft.F., and with the arms :—U.Bd., Ac.Bd., Am.S., Rvs.Am.S., Am.U., and Nk.Rst. Although the Nk.Rst position gives a shorter “ lever ” than that of Am.U., the difficulty of keeping the head and elbows back and the back straight in the Nk. Rst. position is so considerable as to make it the more advanced of the two. Fig. 42.

10. Combinations of Trunk bending forward with Arm movements may be illustrated by the following exercise ; other combinations are carried out on the same plan :—

(St.) Tr. bend. f. with Am. rais. s.

The movements are made rather quickly at first. *Trunk bending forward with arm raising sideways, by numbers—one! two!* At “ one,” incline the trunk forward and at the same time raise the arms sideways. Take care to raise the hands up in line with the shoulders or even a little higher, as this ensures that the arms will not be carried back behind the line of the shoulders, as they would be if they were at all below the shoulder level. At “ two,” raise the trunk and at the same time lower the arms to the side.

The various arm movements that are combined with trunk bending forward are described in the Arm exercises.

11. The following are examples of exercises carried out while the trunk is in the Tr. F. position :—

(i) (St.—Asd.—Hn.Hp.—Tr.F.) Quick Hd. turn.

(With a jump, feet astride—place! Hands on—hips! Trunk forward—bend!) Head turning by numbers—one! etc. (Trunk upwards—stretch! etc.) For the head movements see exercise 2. In head pressing backward, little movement will be obtained, but the exercise teaches the proper carriage of the head in the Tr. F. position.

(ii) (St.—U.Bd.—Tr.F.) Am. stretch. s.

See exercise 10 with regard to the position of the arms when extended sideways. The descriptions of the various arm movements employed are given in the Arm Exercises. The directions in which the arms are stretched, raised, or swung must bear the same relation to the trunk as in the St. position, e.g., in stretching the arms upward they must form a straight line with the trunk. There are, however, two exceptions to this rule :—(1) In the Am. F. position the arms are horizontal, and in stretching, swinging, or raising the arms forward this position is taken ; and (2) in arm flinging and in the Ac. Bd. position the forearms are moved or held horizontally, the hands level with the elbows.

(iii) **(St.-Asd.-Am.D.-Tr.F.) Rhyth. Am. swing. s. from F. Bd. posn.**

The starting position is described in Arm Exercise 12. *Arm swinging sideways—begin! Stop!* Each boy takes his own time. Swing the arms to the F. Bd. position and then sideways, and so on, keeping the arms loose but making quick and vigorous movements. Rhyth. El. and Am. swing. s. can also be carried out. (See exercise 34.)

(iv) **(St.-1 Am.U.-1 Am.F.-Tr.F.) Am. chang. with swing. f.**

(*With arm swinging forward and upward, trunk forward—bend! Left arm forward—lower!*) *Arm changing with a swing—one! two! etc. (Right arm upward—raise! With arm swing forward and downward, trunk upward—stretch!)*

In all the arm swinging exercises taken in the Tr. F. position the chief difficulties are to arrest the movement of the arms in precisely the right positions, and to prevent the trunk from moving when the arms reach the limit of their swing. The first of these difficulties is the special feature of the exercise mentioned above, and constitutes its value as an exercise in control.

12. **(Hz.Sit.-Kn.Ra.Op.-Rvs.Am.B.) Am. rais. s. and u.**

(*With knees up and open, sit—down! Stretch up the body! Turn the hands out and carry the arms back!*) *Arm raising sideways and upward, by numbers—one! two! etc. (On the feet—up!)* The body must be kept stretched up fully, with the back straight and head high, and this, the chief difficulty, is accentuated by the arm movements. The value of the exercise lies in the effort to keep the back straight, and it is for this reason that the exercise is included amongst the Dorsal and not the Arm Exercises. Fig. 43.

The sitting position is also taken with the arms in the F. Bd. position (after stretching the body up), and rhythmic arm swing sideways or rhythmic elbow and arm swinging sideways is carried out. (See Arm Exercises 33 and 34.)

The latter exercise is also taken with the trunk inclined forward:—

(Hz.Sit.-Kn.Ra.Op.-F.Bd.-Tr.F.) Rhyth. El. and Am. swing. s.

After taking the F. Bd. position, the trunk is inclined forward at the command: *Trunk forward—bend!* The movement takes place in the hip joints. In the arm exercise the difficulty is to keep the back straight and to prevent the head from falling forward.

The following is a game form of this exercise:—**Indians at Pow-wow.**

The boys sit on the ground in a circle with the feet drawn close up to the body, knees together with the hands clasped round them, backs very straight, heads held proudly back, “like Indian chiefs at Pow-wow.”

13 (Hz.Sit.—Am.C.) Am. swing. m.

This is very similar to the preceding exercise and requires the same effort of stretching the body. (*With legs straight, sit—down! Stretch up the body! Arms in front—cross!*) *Arm swinging midway—begin! Stop!* (See Arm Exercise 35.) The tendency is to push the loins backward. They must be swung forward and held there.

(b) *Trunk bending Downward.*

14. (Hz.Sit.—Kn.Ra.Op.—Kn.Gr.) Tr. bend. d.

The starting position is taken as in Exercise 12, but with the hands round the knees. *Trunk downward—bend! Trunk upward—stretch!* Bend the trunk down with the head as far between the knees as possible, pulling on the knees to assist the movement. Stretch the body up to the erect position. Fig. 44. Later, the exercise can be carried out at the commands:—*Begin! Stop!* each boy taking his own time.

15. (St.—Asd.) Tr. bend. d. to grasp ankles.

(St.—Asd.) **Tr. bend. d. with hands behind thighs.**

(St.—Ft.F.) **Tr. bend. d. to grasp front ankle.**

Grasp the ankles (ankle), trunk downward—bend! Or:—With hands behind thighs, trunk downward—bend! Trunk upward—stretch! Repeat—one! two! The manner of bending and stretching the trunk is described on page 92. The grasp is taken with the fingers well round the back of the ankles, or the hands are placed behind the thighs just above the knee joints. Fig. 45.

Before the boys bend down, they may be directed to pull with their arms as soon as they have taken a hold so as to get their heads as low as possible. This effort must be brief because of the need for taking a breath, and for this reason the direction to pull should not be delayed until after the grasp has been taken. The boys may also be directed to place their hands on the hips after taking the pull and to try to hold the extra bend gained from it. The hands are raised to the hips quietly; then the command to stretch upward is given.

16. (St.—Bk.Rst.—D.Gr.) Tr. bend d. (Wall bars).

(*Backs against the wall bars—ready! Grasp!*) The hands grasp the bar at their level as they hang by the sides, and the feet are moved back so that the whole of the back of the legs is in contact with the bars. The arms pull the trunk down as close to the legs as possible. Fig. 46.

The hands may also be shifted one at a time down the bars as the trunk is bent forward, and the pull taken from a bar at about the level of the ankles.

17. (St.-Asd.) Tr. bend. d. to touch toes.

(St.) Tr. bend. d. to touch toes or floor with fingers, knuckles or palms.

Touch the toes (floor, with fingers, etc.), trunk downward—bend! Trunk upward—stretch! The direction to touch the toes or floor is used to give beginners a definite object for their efforts. Later, the exercise is taken with the hands on the hips.

18. (St.-Crh.) Kn. stretch.

(Crouch—down!) Knee stretching—begin! Stop! Stretch the knees vigorously, breathing out deeply at the same time, and try to get the knees quite straight while keeping the fingers in contact with the floor; then bend the knees to about a right angle and breathe in. Repeat the stretching and bending in the rhythm of deep breathing.

19. (St.-Asd.-Am.D.-Tr.F.) Rhyth. Tr. press. d. to touch floor between legs.

The starting position is described in Arm Exercise 12. *Trunk pressing downward and touching between the legs—begin! Stop!* This is a free exercise, each boy setting his own rhythm. The rhythmic pressing is carried out as described on page 92, except that, starting from the Tr. F. instead of the Tr. D. position, the body makes wider excursions. The hands touch the floor at each effort of bending, the aim being to reach as far back between the legs as possible. Fig. 47.

20. (St.-Asd.-Tr.D.-Ak.Gr.) Rhyth. Tr. press. d.

The starting position is taken as in exercise 15. The trunk pressing downward is carried out as described on page 92, and is assisted by pulling on the ankles.

21. (St.-Wd.Asd.-Nk.Gr.-Tr.D.) Rhyth. Tr. press. d.

(Feet wide astride—place! Clasp the hands behind the neck! Trunk downward—bend!) Trunk pressing downward—begin! Stop! The arms are raised with the elbows forward and the fingers are interlaced behind the neck. The trunk pressing downward is carried out as described on page 92, the arms assisting to pull the head down at each effort. Fig. 48. (For combinations, see exercise 25.)

(c) *Combinations of Trunk bending Forward and Trunk bending Downward.*

22. (St.-Asd.-Hn.Hp.-Tr.F.) Tr. bend. d.

Trunk downward—bend! Trunk forward—stretch! The trunk stretching forward is described on page 92.

23. (St.-Hn.Hp.) Tr. bend. d., stretch. f., and stretch. u.

Trunk downward—bend! Trunk forward—stretch! Trunk upward—stretch! Repeat by numbers—one! two! three! The movements are carried out in an even rhythm and at a fair speed. See exercises 22 and 9.

The exercise can also be done in four movements by bending forward before bending downward.

24. (St.-Hn.Hp.-Tr.F.) Tr. bend. d. to grasp ankles (or touch floor), Tr. stretch. f. with Hn. Hp.

The trunk bending downward is carried out as in exercises 15 and 17; the trunk stretching forward is carried out as in exercise 22. The hands are placed on the hips while the trunk is being stretched forward. The movements can be taken either at a moderate speed, or in a slow rhythm accompanied by deep breathing at the commands:—*Begin! Stop!*

The difficulty of the exercise is progressively increased by taking the starting position with the arms in the Ac.Bd., Am.S., Hd.Rst., Am.U. and Nk.Rst. positions, and returning to these positions while stretching the trunk forward.

25. Exercise 21 can be combined with the following, which are carried out after the trunk pressing downward.

(a) Rhyth. Tr. stretch. f. with Nk. Rst.

Trunk stretching forward with neck rest—begin! Stop! The elbows are pressed back to the Nk. Rst. position as the trunk is stretched forward, and brought forward again to the Nk. Gr. position as the trunk is bent downward. The rhythm must be slower than that of the pressing downward.

The exercise is also taken from the Hz.Sit.-Kn.Ra.Op-Nk. Gr.-Tr.D. position, the trunk being stretched to the erect position instead of forward. (See Exercise 14.)

(b) Hn. clasp behind back and Tr. stretch. f. with Am. stretch. b.

During the trunk pressing downward the command—*Change!* is given; the fingers are then quickly interlaced behind the back and rhythmic trunk stretching forward is begun. As the trunk is stretched forward, an effort is made to stretch the arms backward. Fig. 49.

This exercise may also be taken by itself, starting from the St.-Asd.-Am.B.Cl.p.-Tr.F. position.

26. (St.) Rhyth. Tr. bend. d. with Am. C., and Tr. stretch. u. with Am. swing. m.

Trunk bending downward with arms crossed in front, and stretching upward with arms swinging midway—begin! Stop! Each boy takes his own time. Bend the trunk down and cross the loosely hanging arms in front, breathing out deeply at the same time—a complete relaxation; then stretch the back fully, swinging the arms midway and breathing in deeply. Repeat in the rhythm of deep breathing.

27. (St.-Wd.Asd.-Am.B.-Tr.F.) Rhyth. Am. swing. f. and u., Tr. bend. d. to beat hands on floor, Tr. stretch. f. with Am. swing, d. and b.

(Left foot wide sideways—place! With arm raising backward, trunk forward—bend!) Swing the arms forward and upward, beat the hands on the floor, stretch the trunk forward and swing the arms back—begin! Stop! Three vigorous movements following one another without pause :—(1) swing the arms forward and upward, (2) keeping the arms in line with the body, quickly bend the trunk down and beat the hands on the floor, (3) quickly stretch the trunk forward and at the same time swing the arms downward and backward. Keep the knees firmly stretched.

28. (Knl.Sit.-Tr.D.-Fh.Rst.) Am. stretch. f. along floor.

(Sit on the heels—down! Head on the hands—ready!) Arms forward—stretch! Arms bend! At the command “ready” place the hands on the ground one on top of the other and rest the forehead upon them as close to the knees as possible. At the command “stretch,” stretch the arms slowly forward along the ground, palms downward, lifting and pressing the head backward with the chin drawn in, and keeping the chest as close to the ground as possible. Then bend the arms and rest the forehead on the hands as before. Fig. 50.

29. (Knl.Sit.-Tr.D.-Fh.Rst.) Tr. stretch. f. with El. swing. s.

The starting position is taken as in the preceding exercise. *Trunk stretching forward with elbow swinging sideways—begin! Stop!* Stretch the trunk forward to a horizontal position with a flat back, and at the same time swing the elbows sideways (see Arm Exercise 34). Then lower the hands and forehead again to the starting position. Fig. 51.

The exercise can also be done with arm swinging sideways.

30. (Knl.Sit.-Am.B.Clp.-Tr.D.) Tr. stretch. f. with Am. stretch. b.

After sitting down on the heels and interlacing the fingers behind the back, bend the trunk forward and bring the forehead as close as possible to the knees. *Stretching the trunk forward and the arms backward—begin! Stop!* Stretch the trunk forward as in the preceding exercise and at the same time stretch the arms backward and try to get as flat a back as possible. Then relax and lower the head again.

The exercise can also be done with the hands round the heels and pulling on the heels as the trunk is stretched forward.

31. (Knl.Sit.-Tr.F.-U.Gr.) Rhyth. Tr. press. d. (:). (Wall bars).

If without assistance, the performer presses his trunk down as low as possible by a strong contraction of the muscles of the back, he then relaxes slightly and lets the trunk rise, then again contracts

the muscles, and so on, setting up a rhythmic up and down swaying of the trunk, which assists in getting the trunk down at each effort.

The exercise, however, is more effective if an assistant helps to augment the downward swing by pressing rhythmically with his hands on the performer's shoulder blades. The assistant stands with his back to the wall bars between the performer's arms. Fig. 52. The exercise can also be done in the Fr.St.-Asd.-Tr.F.-U.Gr. position, the assistant standing on the ground or on the lowest bar.

32. (Hi.St.-Asd.-Tr.F.-U.Gr.) Am. bend. (:). (Wall bars).

The performer stands on the lowest bar, grasps a bar at chest height (or lower if he can manage it) with the hands rather more than the width of the shoulders apart. Then, keeping his knees straight, he lowers his body away from the bars until his arms and trunk are in line. The assistant, standing behind, places his fingers under the performer's elbows. The performer bends his arms and pulls his head in to the bar he is grasping, the assistant applying gentle pressure under the elbows to assist him in keeping them up. He then stretches his arms again, keeping his back quite straight throughout. Fig. 53.

III. SPANNING EXERCISES.

The characteristic of these exercises is that the trunk is forced forward and upward into an inclined and arched position between two fixed points by a strong contraction of the muscles which extend the dorsal spine and the shoulder joints. The fixed points between which the body is momentarily suspended, like the span of a bridge, are provided by the arms, e.g. by grasping an apparatus or by pressing the elbows or hands on the ground, and by the legs or buttocks.

The loins, which can be arched much more easily than the dorsal spine, and which would monopolise the movement if allowed to do so, must be kept straight in order that the work may be concentrated in the dorsal muscles. The fixation of the loins is effected partly by the nature of the starting position, partly by an active contraction of the abdominal muscles (the extensors of the loin-curve) synchronous with that of the dorsal muscles. The degree to which each of these means is effective varies with the character of the exercise. But neither will be effective unless in the spanned-out position the shoulder joints are fully extended and the arms, when above the head, form a prolongation of the general curve of the body. If an angle is formed between the arms and the trunk by allowing the chest to fall, the arch is forced into the loins and an undesirable position arises. The possibility of making progress in these exercises is therefore determined by the ability to keep the arms in line with the body during the spanning. The intense muscular effort required to hold the body in the spanned-out position, and the restriction of the breathing imposed by this position, makes it

undesirable that boys should hold the position for more than a very brief interval. Repetition of the movement is more suitable for them than a sustained effort under difficult conditions. The breathing must receive careful attention. In all the spanning exercises the head must be pressed back between but not behind the arms.

Three passive exercises have been included for older boys, in which the performer, apart from retaining the grasp of the hands and the correct carriage of the head, relaxes his muscles and allows an assistant to give the movement. These exercises have not, in fact, the essential characteristic of the spanning exercises, but they help to augment the flexibility required in spanning and therefore facilitate its correct performance. An exercise in taking the F. Hg. position is included for the same purpose.

The Spanning exercises strengthen the dorsal spinal muscles and increase the extensibility of the dorsal spine and the chest, particularly the upper ribs. The muscles of the shoulders also benefit. The exercises provide a valuable means of correcting faulty carriage of the body.

33. (Bk.Ly.—Ac.Bd.) Span.

(On the back—down! Elbows sideways—place!) Spanning—one! two! At “one,” press the elbows on the ground and lift the shoulders and head, but press the head back so that it is close to the ground, though not actually touching it. The lift at first may be so small that little head pressing backward can be done; the effort however, should be to arch the chest. At “two,” lower the head and shoulders to the ground. Fig. 54.

The difficulty of the exercise is progressively increased by extending the arms sideways, midway, and finally upward, and pressing with the closed fists. Fig. 55.

34. (Bk.Ly.—U.Gr.) Span. (Wall bars).

Lie down with the head towards the bars, pass the fingers under the third or fourth bar and grasp it firmly with the hands wide apart and the wrists turned up. In the first attempt to span from this position there is usually a tendency to bring the head forward and to round the back. The boys should be directed to look at the hands and to push with the heel of the hand. Fig. 56.

35. (Fr.St.—F.Gr.) Taking F. Hg. posn. (Wall bars).

See Heaving Exercise 32.

36. (Knl.Sit.—M.[U.]Gr.) Span. (Wall bars).

(Sit on the heels with the back against the bars—down! Arms midway (upward)—raise! Grasp!) Spanning—one! two! The starting position is taken with the soles of the feet against the lowest bar. The hands take a firm grasp on the highest bar that can be reached from the named position of the arms. When the arms are to be

raised midway, the Knl.Sit. position should be taken with the back against one of the uprights. The spanning thrusts the body out to a kneeling position with the chest well raised. The body is then allowed to sink back to the starting position. The movement must not be started by throwing the hips forward, but by a thrust with the arms which lifts the body from the sitting position. Fig. 57.

37. (Hz.Sit.—Asd.—Fxd.) Hd. press. b. and Tr. lower. b. to rest head on floor. (Wall bars).

Sit down with the feet under the lowest bar and the legs extended. Place the palms of the hands on the ground beside the thighs. *Head backward—press! Trunk backward—lower! Lie down! Sit up!* Press the head back and assist the extension of the spine by pressing down with the hands. Keeping the chest well arched, lower the trunk backward at a moderate speed until the back of the head rests on the ground. After holding the body spanned between the head and the buttocks for a moment, relax the muscles and lie on the ground, then return to the sitting position (informally) and repeat. The movement backward must take place in the hip joints only and not at all in the loins. The exercise can be concluded with a Trunk bending downward from the sitting position.

The starting position is also taken with the arms stretched upward; the body is then lowered backward until it is spanned on the floor between the fists and buttocks.

38. (Lean St.—M.[U.]Gr.) Span. (Wall bars).

(Backs against the wall bars, feet one (two) foot-length forward—ready! Arms midway (upward)—grasp!) The spanning is done as in exercise 36, except that the feet act as the lower fixed point instead of the knees, and the abdominal muscles must be actively contracted to prevent the hips from coming forward and the loins from bending. The movement must not be started by throwing the hips forward, but by a thrust with the arms which lifts the back away from the bars. The hip and knee joints must be strongly stretched. The hands must grip the bars firmly with the wrist a little turned up. Fig. 58.

39. (Hz.Sit.—Bk.Rst.—Ft.Rst.—U.Gr.) Span. (:)

The performer sits with his feet against the wall bars or against those of another performer. The assistant stands or kneels behind the performer with a knee, cushioned with his hands, against the performer's back. (The foot of the leg giving support is turned inwards.) The performer interlaces his fingers behind the assistant's neck. The assistant then draws his own body backward and extends the performer's body over his knee, taking care not to lift him from the ground. He then brings his body forward again and lets the performer relax. The movements are carried out in a slow, even rhythm. This is a free exercise.

40. (Bk.Ly.-Kn.Ra.-U.Gr.) Span. (:) (Wall bars).

The performer lies on his back with his knees raised and grasps the third or fourth bar up. The assistant, standing astride of the performer's hips, stoops down and places his hands under the performer's shoulder blades, and draws his body upward and away from the bars. Fig. 59. He then lowers the performer's body to the ground. The performer must grasp firmly and keep his head in a good position. The movements are repeated in a slow, even rhythm.

41. (Knl.-U.[M.]Gr.-Tr.B.) Span. (:) (Wall bars).

The performer takes the position given by exercise 36. The assistant, with his knees slightly bent and his feet, turned in, between the performer's knees, places his hands behind the performer's shoulder blades and draws his body away from the bars and slightly upward. He then allows the performer to sink back, and repeats the movements in a slow, even rhythm. The assistant should keep his lower legs against the performer's thighs in order to prevent his hips from coming forward.

42. Slide the log.

This is a game form of spanning. The boys in pairs. The log lies on his back with his feet apart and makes himself rigid. The lumberman interlaces his fingers under the log's neck and lifts him to an inclined position; then lowers him gently to the ground. Later, the lumberman, after lifting the log, can push him forward a short distance with his heels sliding along the ground.

IV. PRONE LYING.

The essential feature of these exercises is the holding of the Pn. Ly. position. The trunk is held by the spinal muscles in a horizontal, or nearly horizontal, position, with the dorsal spine somewhat extended. The value of the exercises consists in training the spinal muscles to hold the trunk in a good posture while supporting its entire weight. This helps to establish the habit of good posture in the erect position, where the spinal muscles work at much less disadvantage. These exercises are therefore strongly corrective. They are closely akin to the exercises in the St.-Tr.F. position described in Section II, and the methods of increasing their difficulty are generally the same.

In the Hi. Pn. Ly. position the trunk, with the back held straight, can be lowered by movement at the hip joints.

Introductory exercises are employed which are not quite typical, for the trunk is not entirely supported by the spinal muscles, but they exercise these muscles in a way analogous to that of the type exercises. In these introductory exercises the body lies face downwards on the floor and the muscles of the back are contracted to lift the head, or, with the assistance of the extensor muscles of the hips, both the head and the legs.

The Hi. Pn. Ly. position is taken across a bench, on which the thighs rest with the knee-caps just clear of the near edge. The lower part of the abdomen must not rest on the bench. The feet are fixed in the wall bars or are held by another boy. The boy giving the support should kneel on one knee or stand with feet astride, grasp the performer's ankles, and lean forward so that his arms bear vertically down on the ankles with the weight of his shoulders above them. He must take care to keep the feet pressed down so that the performer's thighs lie horizontally on the bench. If he presses down too hard the thighs are painfully forced on to the near edge of the bench ; if he does not press down hard enough the performer has great difficulty in holding the position and feels very insecure. The right degree of pressure is quickly learnt if care is taken to point out what is required.

The commands used are : *Prone lying on the bench—ready !* The performer lies across the bench, rests his hands on the ground, and fixes his feet in the wall bars, or the assistant grasps his ankles. Fig. 62(a). The command for placing the arms in some gymnastic position is then given ; the hands are lifted from the ground at the same time but without hurry so as not to throw the weight suddenly on to the muscles of the back, the arms are raised to the named position, the head is pressed backward moderately and the upper part of the trunk *slightly* lifted. The lifting of the trunk must not be exaggerated, or the movement will be transferred to the loins, where no movement should occur. The effort required is felt as a pressing of the chest forward away from the bench. At the command *Rest !* the hands are placed quietly on the ground.

In lowering the trunk from the Hi. Pn. Ly. position the movement occurs at the hips, the posture of the body is maintained, or the head is pressed still farther back so that the chest may lightly touch the ground.

The arm movements carried out in the Hi. Pn. Ly. position are described in the Arm Exercises. The directions in which the arms are moved and the positions they take up must bear the same relation to the trunk as in the St. position, except that in stretching the arms forward they are stretched horizontally, and in arm flinging and in the Ac. Bd. position the arms are kept horizontal with the hands level with the elbows.

43. (Pn.Ly.) Hd. press. b.

(*Prone lying—down !*) *Head pressing backward—one ! two !* Lie face downward with the arms extended along the sides, the chin and the palms of the hands resting on the ground. At "one," press the head backward (see Exercise 8), slide the finger-tips along the ground as far backward as they can reach, and lift as much of the chest as possible from the ground. At "two," lower the head and chest. Fig. 60.

44. (Pn.Ly.—Am.U.) Hd. press. b. with Am. and Lg. rais.

(With arms up, prone lying—down!) Head pressing backward with arm and leg raising—one! two! Reach forward with the hands and backwards with the feet as far as possible while raising the arms and legs. Fig. 61. The difficulty is to keep the legs straight and together.

This exercise can be taken with the abdomen resting across a bench. The boys should be allowed to test their balance for themselves before doing the exercise in this way.

45. Hi.Pn.Ly.—Hn.Hp.pasn.

Hands on—hips! Rest! The ready position and the Hi.Pn.Ly. position are taken as described above. Fig. 62(b).

The Hi.Pn.Ly. position can also be taken with the arms in the Ac.Bd., Hd.Rst., Am.U. and Nk.Rst. positions, which are arranged here in their order of difficulty.

46. (Hi.Pn.Ly.—Hn.Hp.) Hd. turn.

The head turning is carried out quickly by numbers as in Exercise 1.

47. (Hi.Pn.Ly.—U.Bd.Clen.) 2 Am. punch. f.

The arms punch horizontally forward.

Arm stretching sideways and upward, arm parting, arm flinging, and arm changing between Am. U. and Nk. Rst., are also carried out in the Hi.Pn.Ly. position. These are described in the Arm Exercises.

48. (Hi.Pn.Ly.—Hn.Hp.) Tr. lower.

Trunk—lower! Trunk—raise, or Trunk lowering and raising—one! two! The exercise is performed as described on p. 103. The difficulty of the exercise is progressively increased by placing the arms in the Ac.Bd., Hd.Rst., Nk.Rst. and Am.U. positions. Fig. 62(c).

V. EXERCISES IN HANGING FRONT REST POSITION.

These exercises can be compared with Exercise 44. The muscles of the back contract and draw the hips and legs away from the wall bars. The weight of the legs prevents much bending in the loins and causes the dorsal spine to be extended.

49. (Hi.St.—U.Gr.) Hd. press b. with Lg. lift. b. (Wall bars).

(Grasp the top bar, facing it—up!) Head pressing backward and leg lifting backward—one! two! Press the head back and lift the legs backward as far as possible with the knees and ankles well stretched. Lower the feet on to a bar and stretch the head up. Fig. 63.

The exercise is also done with knee bending as the legs are lifted. *Head pressing backward and leg lifting backward with knee bending—go!* Try to lift the heels to the seat by lifting the knees away from the bars as far as possible.

VI. EXERCISES IN TOE LUNGE POSITION.

These exercises are similar in effect to those carried out in the St.-Tr.F. position. They are more difficult because the position is harder to maintain and demands a much more extensive muscular control. The Toe Ln. position is taken as in Leg Exercise 20.

The general fault in these exercises is to ease the strain on the back muscles by holding the trunk raised too much and throwing weight on to the back toe.

50. (St.-Toe Ln.-Hn.Hp.) Am. bend. and Hn. Hp.

(Hands on—hips! Left toe backward—lunge!) Arms upward—bend! Hands on hips! etc. Feet change—place! Repeat the arm movements.

Other arm exercises that can be carried out from the St.-Toe Ln. position are arm stretching sideways, forward and upward, arm flinging, and arm parting. The manner in which they are carried out is described in Exercise 11. Head pressing backward can also be taken from this position, and in doing this care must be taken not to raise the trunk.

51. Toe lunging backward is carried out with arm movements, e.g. :—

(St.-Ac.Bd.) Toe lung. b. with Am. fling.

Toe lunging backward with arm flinging, by numbers—one! two! three! four! At “one” lunge backward and fling the arms sideways, at “two” recover the foot and bend the arms across, at “three” and “four” lunge and recover with the right foot.

Arm stretching forward and arm stretching upward can be similarly combined with the lunging. The arm stretching upward should be done slowly at first.

52. (St.-Toe Ln.-Hn.Hp.) Tr. lower. to hz.

Trunk—lower! Trunk—raise! Lower the trunk to the horizontal by bending forward at the hips without lifting the toe from the ground or stretching the bent knee, i.e., without allowing the hips to rise or sink. Keep the bent knee well turned outward.

The exercise can also be carried out with the arms in the Nk. Rst. and Am. U. positions. Fig. 64.



Fig. 36.



Fig. 37.



Fig. 38.



Fig. 39.



Fig. 40.



Fig. 41.



Fig. 42.



Fig. 43.



Fig. 44.



Fig. 45.

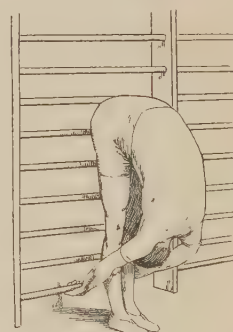


Fig. 46.



Fig. 47.



Fig. 48.



Fig. 49



Fig. 50.



Fig. 51.

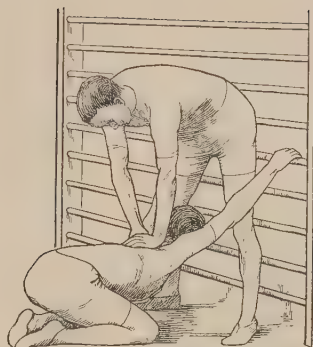


Fig. 52.



Fig. 53.



Fig. 54.



Fig. 55.



Fig. 56.



Fig. 57.

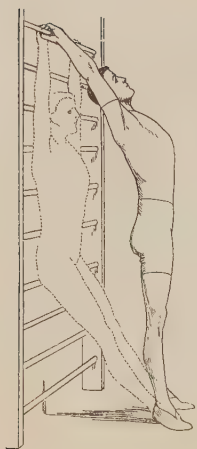


Fig. 58.

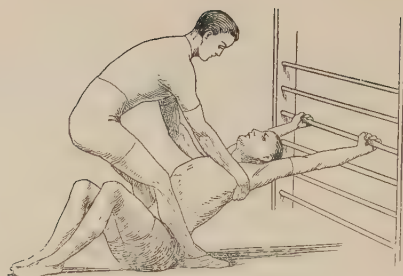


Fig. 59.



Fig. 60.



Fig. 61.

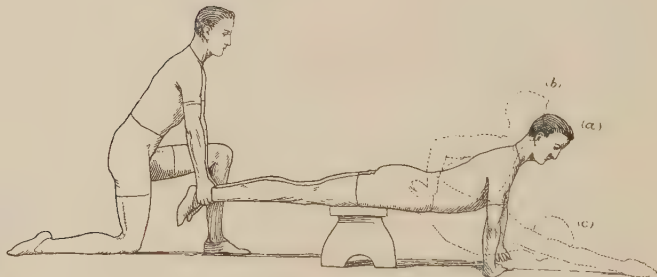


Fig. 62.

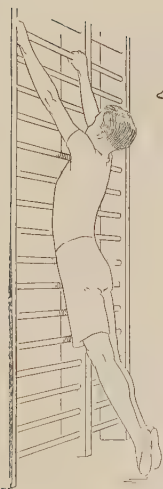


Fig. 63.



Fig. 64.

CHAPTER VIII.

HEAVING EXERCISES.

The characteristic of the Heaving Exercises is that the hands grasp an apparatus and the arms support or raise the body with or without the help of the legs. They are essentially exercises of suspension and climbing. The muscles chiefly employed are those which maintain the grasp and those which bend the elbows and draw them to the sides of the body, so raising the body towards the fixed hands ; namely, the flexors of the hands and elbows and the muscles which attach the arms and shoulder-blades to the front and back of the trunk. When the body is lowered by the arms from the Heave Hanging position, the same muscles are employed as when the arms raise it into this position ; but as less effort is required to lower than to raise the weight of the body, exercises of lowering, without previous heaving, afford a useful introduction to the Heaving Exercises for younger boys.

As the muscles employed in heaving (and lowering) include some of the most important of those concerned in inspiration, the power of this function is increased by the strengthening of these muscles, the more so as the general expansibility of the chest is promoted by the forcible lifting of the ribs which frequently occurs in the Heaving Exercises.

Further, when the Heaving Exercises are carried out in the prescribed manner, they help to establish a correct balance between the muscles which attach the arms and shoulder-blades to the trunk, thus helping to secure the proper carriage of the shoulders and chest. They also teach the boy how to use his strength in manual occupations without getting into a cramped and hunched-up attitude, which impedes respiration and therefore working efficiency. The Heaving Exercises, therefore, supplement the corrective effects which the Dorsal Exercises have on the upper part of the body. If, however, they are wrongly applied or faultily executed, they will bring about the very defects which they and the Dorsal Exercises are designed to prevent. The chief security against this is to maintain a correct carriage of the head and chest whilst performing the exercises, and consequently this point should receive constant attention from the teacher. Ability to maintain a good position should be regarded as the test of ability to make progress in these exercises. Younger boys can hold a good position when hanging with straight arms, but not when lifting the body, unless the arms are relieved of a part of the weight by resting the feet on the ground (as in B. Hg. position), or by using the legs to assist with an upward thrust. Exercises of the kind suitable for younger boys are given in the Progressive Lists. They include hanging, travelling, climbing

on ropes and ladders, twisting in window-ladders, and heaving in the B. Hg. and F. Hg. positions. The boys should be given plenty of practice in these exercises, as this will enable them later to take up and make progress in the more strenuous exercises and to reap their full benefit.

I. HAND SHIFTING IN HIGH STANDING POSITION.

In these easy exercises, though much of the weight is supported by the legs, the bent arms are brought into vigorous use.

1. (Hi.St.-Hv.Gr.) Alt. Hn. shift, d. and u. with legs straight. (Wall bars).

Stand on the lowest bar and grasp at head height—up ! (Down !)

The hands grasp close to the uprights, thumbs round the bar.

Hand shifting downward and upward, by numbers, left hand, right hand—one ! two ! three ! four ! At "one," the left hand is shifted to the next bar below ; at "two," the right hand is shifted down to this bar ; at "three," the left hand is shifted up again ; and at "four" the right hand is shifted up. The legs are kept straight and the seat is allowed to fall away from the bars as the hands are shifted downwards. The elbows must be kept well up and back so that the chest may be kept forward and the head up. The hand shifting can be repeated several times in succession.

When the movements are well understood, the hands may be shifted downwards and upwards three or more bars, the right hand following the left on to each bar. *Hand shifting downwards three bars—begin ! Upward—begin !*

Later, the hands may pass each other at each shift without coming to the same bar. *Hand shifting downward and upward four bars, hand beyond hand—begin !*

2. (Hi.St.-Hv.Gr.) 2 Hn. shift. d. and u. with legs straight. (Wall bars).

Hand shifting downward and upward two bars, both hands together—begin !

This is an advance on the preceding exercise, both hands being moved at the same time. The arms give a sharp pull before the grasp is released for each shift. The exercise should not be carried down more than four or five bars. After a little practice the hands may be shifted downward and upward several times in succession.

In all these exercises the elbows should be kept well bent so that the chest may not come away from the bars more than is necessary.

II. HANGING POSITIONS AND MOVEMENTS IN THEM, INCLUDING HEAVING AND LOWERING.

In all the hanging positions, except in those with Inward Grasp, the hands should never be less, and should usually be more, than the width of the shoulders apart. When heaving is to be practised, the hands should be separated by more than the shoulder-width.

When the feet are unsupported, the body should hang at full length between the arms, with the head moderately drawn (pressed) back and the chin in, the chest carried a little forward, and the legs hanging loosely with the heels together.

Strength and sureness of grasp come only with frequent practice. At all stages of the training free practice in hanging, e.g., in the form of a game, and free climbing on different kinds of apparatus are of value in this respect.

In the Hg.-In.Gr. position on the beam or a single rope, and while heaving in this position, it is not possible to keep as good a carriage of the head and chest as in other heaving exercises, but the back should be held as straight as possible.

The following are useful preparatory exercises :—

3. (Hi.St.-U.Gr.) Taking Hg. posn. (Wall bars).

The starting position is taken by standing on and facing the bars with the hands grasping the highest bar that can be reached. The hanging position is taken on the command : *Feet off!* And a rest is taken on the command : *Feet—on!* To ensure a correct position of the head, the boys may be directed to look at the top bar.

4. (Fr.St.-Hv.Gr.) Jump. u. and d. on wall bars (lowest 5 rungs).

Stand one foot away from the wall bars and grasp the bar that is level with the eyes, thumbs round. The exercise should be taught by numbers, but can soon be taken free. *Jumping up and down on the first bar (or on the second bar, or on each bar up to the fifth) —begin! Stop!* Jump on to the lowest bar landing on the balls of the feet, then jump back to the starting position. Repeat several times. Both in jumping and landing the knee and ankle joints should be flexible and yielding but should bend only slightly. Progress is made by jumping on to the second bar, and so on up to the fifth ; or by jumping first on to the lowest bar, then back to starting point, then on to the second bar, and so on up to the fifth. When landing on the higher bars the knees should remain bent and should be widely separated. The heels should be kept together.

The jump itself is simple, though a useful exercise in accurate movement. The part played by the arms gives the exercise its chief value. Each upward jump is assisted to a considerable extent by the arms, which also have to steady and partly support the body when the feet land on the bar. The hands should grasp firmly and the elbows be kept raised sideways.

5. Hanging catch game.

All climbing apparatus is lowered and the beams are placed at stretch height. One boy is chosen as “ He ” and chases the others, who are safe from being tagged only when hanging by the arms, without the support of the feet or legs, unless on a rope. The game can be varied by requiring all to change to another piece of apparatus whenever the teacher blows his whistle.

We now come to the different hanging positions —

6. Hg.-Or.Gr. posn. (Beam).

The underside of the beam should be at stretch height. The boys stand ready immediately beneath the beam.

Overgrasp—up! Spring up and grasp the beam with the hands in pronation. Fig. 65(a). *Down!* Give a slight pull with the arms, let go the beam and drop lightly on the toes as in landing from a jump. If necessary, the performer can be assisted in taking the position by another boy, who stands behind him and grasps him at the waist and gives a lift as he springs up.

7. Hg.-Ur.Gr. posn. (Beam).

As in the preceding exercise, but with the hands supinated Fig. 65(b).

8. Hg.-Alt.Gr. posn. (Beam).

Alternate grasp, with left (right) hand overgrasp—up!

As in Hg.Or.Gr., but with one hand supinated and the other pronated. The shoulders will be at an angle to the beam. Fig. 65(c).

9. Hg. In. Gr. posn. (Arm ladder, 2 ropes, beam).

Make ready beneath and facing along the ladder or beam, or between the two ropes. Spring up and grasp with the palms turned inwards. Grasp the ropes as high as possible with the hands at an equal height. Fig. 65(d).

10. Leg swinging sideways and Leg parting can be carried out in the Hg.Or.Gr. position.

(a) *Leg swinging sideways—begin! Stop!* The legs, held together, are swung directly from side to side, chiefly by free and flexible movements at the waist. The head must retain its position and the body should not be allowed to rotate to the side towards which the legs are swinging.

As the strength and the amplitude of the swing increase, the left elbow may be slightly bent as the legs swing to the left, and vice versa. A further development is made in Exercise 11.

(b) *Leg parting, by numbers—one! two!*

At "one" the legs, kept straight, are separated widely, and at "two" they are brought together again. The legs should be moved directly sideways.

11. (Hg.-Or.Gr.) Lg. swing. s. with alt. Hn. lift. (Beam, arm ladder).

At the top of each swing the hand swung to is lifted from the beam. A second beam may be placed a few inches above that on which the exercise is carried out, and the performer encouraged to touch its underside with the back of the fingers as the hand is lifted.

This exercise leads up to Exercises 29 and 30 in the Arm Walks.

After the boys have learnt to hang correctly, with or without the help of the legs, on the different kinds of apparatus, heaving and lowering can be introduced. Heaving is carried out by bending the arms and separating the elbows as widely as possible. The head is kept back and the upper part of the chest is lifted towards the apparatus. When the legs are unsupported they should continue to hang loosely, and the natural inclination to bring them forward should be resisted. Whenever an effort is made with the arms, there is a tendency to contract the abdominal muscles in order to fix the chest and provide a firm anchorage for the working muscles. The weight of the legs when brought forward in this exercise enables the abdominal muscles, by fixing their lower attachments, to exert a powerful downward pull on the chest, which is contracted and fixed; breathing is stopped, the head, elbows and shoulder-blades come forward, and a very undesirable position is assumed. By allowing the legs to hang loosely, the abdominal muscles are relaxed and breathing can be carried on, especially with the diaphragm, the elbows can be kept back, the upper part of the chest is expanded, and the great pulling muscles passing from the trunk to the arms are brought vigorously into play.

12. (Pn.Ly.) Heav. along bench.

The performer lies prone along the bench at one end, grasps the sides of the bench-top, and heaves himself along with his arms to the other end. A race can be arranged with the benches placed parallel to each other

13. (Bk.Ly.) Heav. along bench.

The same as the preceding exercise, but lying on the back.

14. (Hi.St.-Hv.Gr.) Tr. lower. (Wall bars, 2 beams).

Stand on and facing the wall bars with the hands grasping at head height (or on one beam and grasping another).

Left (Right) foot—off! The named foot is allowed to hang down. *Trunk lowering and raising, by numbers—one! two!* At “one” the trunk is lowered until the arms are straight, some assistance being given by the standing leg, the knee being pressed well outwards as it is bent. The elbows should be pressed outwards, the head held erect, and the body kept square with the bars. At “two” the free foot is placed alongside the other, the knees are straightened and the S.P. resumed. Progress is made by removing both feet and lowering the body by the arms alone. The feet are then placed on a bar, and the boys step up the bars to the S.P.

15. (Hi.St.-Kn.Fl.Bd.-U.Gr.) Heav. with Kn. stretch. (Wall bars, 2 beams).

The position is taken so that when the knees are fully bent the hands can grasp at the full stretch of the arms.

Heaving with knee stretching, by numbers—one! two! At “one” heave the chest up to the grasped bar or beam, using the legs as little

as possible. At "two" lower the body to the starting position. Progress is made by using only one leg, allowing the other to hang down.

16. (Hi.St.-Bk.Rst.-Hv.Gr.) Tr. lower. (Wall bars, 2 beams).

The same as the preceding exercise, but standing with the back to the bars. This may be practised first with the feet on the ground, the knees yielding as the body is lowered.

17. (Fr.St. [Hi.St.]-Hv.Gr.) Lg. lift. b. with Kn. bend. (Wall bars).

Stand close to and facing the wall bars, and grasp at the height of the eyes.

Legs lifting backward with knee bending—begin! Stop! The weight of the body is taken on the arms, and the feet are raised backward by bending the knees; the feet are then placed on the ground; and so on.

18. (Hi.St.-Asd.-F.Gr.-Tr.F.) Heav. (:). (Wall bars).

Stand on the lowest bar with feet astride and grasp at chest height—ready! Trunk forward—bend! Supports—ready! Heaving with assistance—begin! Stop! Trunk upward—stretch! Places—change!

The trunk is bent forward allowing the seat to go back and the arms to straighten until they are in line with the trunk. The supporters stand behind the performers and place their hands at the performers' elbows. Heaving is carried out by each pair independently, the performer bending his arms with elbows well raised, and endeavouring to bring the crown of his head to the bar next below the one grasped. The head with the chin drawn in must be kept in line with the trunk. The supporter, with a gentle lift, helps the performer to keep his elbows up. Later, the exercise can be carried out without assistance. Fig. 52.

19. We now come to heaving in the hanging positions. Heaving is carried out on the commands: *Heave! Lower!* At first the body is raised until the top of the head touches the underside of the beam, later until the upper part of the chest touches the beam. Fig. 66. The heave should not be continued beyond the point where correct carriage can be maintained. The body is lowered steadily. Heaving can also be done on two ropes.

It is well to start the heaving from a position standing on the ground and grasping the beam, which is placed at the full stretch of the arms; e.g. **(St.-Or.U.Gr.) Heav. (Beam).** This gives the arms and hands a rest after each heave, and a little spring with the ankles helps in the lift.

20. Swing. with heav. and hi. Lg. rais. in f. swing (2 ropes).

The performer grasps the ropes just below stretch height and moves backward as far as the grasp will allow. He then lifts the feet, bends the arms, and as he swings forward raises his legs as

high as possible. At the end of the backward swing the legs are lowered, the arms straightened and the feet placed on the ground. Fig. 67.

Later, the start can be made farther back with the ropes lightly held. Two or three running steps forward are taken while the ropes are allowed to run through the hands, then a little jump is made, the hands reach up as high as possible and take a firm grip, the arms heave up the body and at the same time the legs are swung forward. The legs may be swung vigorously backward in the backward swing and, instead of landing, another forward swing and leg lifting taken.

This exercise has also a strong abdominal effect and further serves as a preparation for Heaving vaults.

III. ARM WALKS AND ARM JUMPS.

Until the boys reach the age of twelve, the Arm Walks should be taken in free form, and even later it is advisable to allow new exercises to be practised without much insistence on correct form. The exercises are carried out first from the Hg. positions, later from the Hv. Hg. positions.

The Arm Walks in the Hv.Hg. positions are carried out in the same way as those in the Hg. positions, with the correct carriage of head maintained and without any swing of the body or legs.

The commands for all these exercises are *Begin!*, and *Stop!* or *Down!* Many of them can be carried out "in stream." The earliest exercise is:—

21. (Hg.—Or.[Alt.]Gr.) Am. walk s., free form with short quick steps.

This is taken first on the wall bars, then on the beam, and is carried out quite informally. A gradually increasing demand for better form can be made until in the later exercises the body is carried steadily along by the arms while maintaining the correct posture. The hand on the side towards which the movement is to be made always takes the first step. Care must be taken not to bring the following hand closer to the leading hand than the width of the shoulders.

22. (Hg.—Or.Gr.) Am. walk d. (Wall bars).

This is a convenient preparatory exercise, as all the class can take part in it at the same time and repeat it several times without further orders. The starting position is taken on the bar below the gap. The movement can be done either hand to hand, one hand leading and the other following it to the same bar (in repeating, the other hand should lead), or hand under hand on alternate bars. As the feet touch the ground they can be raised and the movement continued until the performer kneels on the ground.

The exercise can also be carried out on the wall-ladder, the window-ladder (tilted), and on two ropes. Its difficulty is then considerably

increased. The starting position in each case is Hv.Hg., and on the ropes the hand should not be shifted down more than about 6 inches at each step.

23. In (Hv.Hg.-Alt.Gr.) **Am. walk s.**, the leading hand takes over-grasp, the following hand under-grasp.

24. (Hg.-In.Gr.) **Am. walk b. (Arm ladder)** and (Hv.Hg.-In.Gr.) **Am. walk b. or f. (Arm ladder)** should be practised at first down the ladder if it is inclined. In the latter exercise, when taken on a beam, it is easier to preserve a good carriage of the head and chest if the beam can be tilted slightly and the arm walk taken up it. Fig. 68.

25. In the exercise (Hg.-Or.Gr.) **Am. walk s. with turn at mid-beam**, the hands are changed to the opposite side of the beam when the middle is reached, and the walk is continued along the remainder of the beam with the other hand leading. A later development is provided by the exercise :—

26. (Hg.-Alt.Gr.) **Am. walk with turn. at each step.** This is carried out either forward or backward. One hand releases its grasp ; this sets the body swinging and turning, and when it has made a half turn the free hand takes a fresh grasp farther along the beam. The movement is facilitated by a preliminary swing of the legs (see Exercise 29). As proficiency is acquired, the free arm can be swung down by the side of the body and then backward and upward to grasp the beam.

27. In a later exercise (Hg.-Ur.Gr.) **Am. walk s. with turn. at each step**, over-grasp and under-grasp are taken alternately. The more advanced exercise (Hg.-Alt.Gr.) **Am. walk with turn., heav. and lower. at each step** is carried out in the same way, with the addition of heaving and lowering after each step. Similarly (Hg.-Ur.Gr.) **Am. walk s. with turn., and with heav. and lower. in each Ur. Gr. position or at each step.** In (Hv.Hg.-Alt.Gr.) **Am. walk with turn. on one arm**, the weight of the body is transferred to the hand with under-grasp, the other hand is dropped to the side, the body is rotated under the beam on the bent arm, and the free hand takes under-grasp, the other hand now having over-grasp.

28. In the **Arm Jumps** both hands are moved together a short distance, the heaving position being maintained throughout. Unless the jumps follow each other evenly and quickly, the body will swing about and the exercise will become much more difficult. These are strenuous exercises and should be carried out over a short distance only.

29. (Hg.-Or.[Alt.]Gr.) **Am. walk s. with Lg. swing.**

As the legs swing in the direction of the movement, the leading hand is lifted and placed down a little farther along the beam, and

as the legs swing back the other hand is shifted an equal distance in the same direction. The tendency to shift the following hand too close to the leading hand must be resisted.

A further development is given by the exercise :—

30. (Hg.—Or.Gr.) Am. walk s., stepping u. and d., with Lg. swing. (2 beams).

One beam is placed one or two holes above the other. The exercise is started on the lower beam. The legs get up a good swing, then one hand is shifted to the upper beam followed on the reverse swing by the other, the first hand is then moved down to and along the lower beam, followed by the other, and so on. The step-up requires a stronger swing than the step down.

IV. BACKWARD AND FORWARD HANGING POSITIONS, AND MOVEMENTS IN THEM.

These exercises supply the need of younger boys for heaving exercises in which the weight of the body is not wholly supported by the arms.

31. The **Backward Hanging position** should be practised at first with the beam at shoulder height, and should be taken by running the feet forward and backward with short steps. Later, the beam may be set lower, and the legs swung forward and backward with a heave of the arms and a bending and straightening of the knees.

Stand at arm's length from the beam. *Grasp! Backward hanging—down! Up!* Grasp the beam with the hands a little more than the width of the shoulders apart. Run or swing the legs forward until the arms are at right angles to the body (not vertical). The body is supported by the hands and the heels and should be stretched and straight from the head to the heels, with the chest slightly arched. To retain the position, the muscles of the back and buttocks must be strongly contracted. The distance the heels are advanced will depend upon the height of the beam. Fig. 69.

32. The **Forward Hanging position** should be practised at first on a beam or wall bar just above head height. The wall bars are the more suitable if the boys vary much in height. Progress is made by gradually lowering the beam to shoulder height or grasping a wall bar at corresponding heights, and also by grasping the apparatus with the hands wider apart than the width of the shoulders.

Stand facing and about a foot away from the apparatus. *Grasp! Forward hanging, by numbers—one! two!* At "one," bend the right knee outwards, straighten the arms and carry the left foot as far back as possible. At "two," carry the right foot back. The body is supported by the hands and balls of the toes. The hip and knee joints should be strongly stretched and the feet carried back sufficiently far to keep the chest from touching the wall bars or from going forward under the beam. The head must be held erect with

the chin in, and the shoulder joints must be fully extended. *Standing position, by numbers—one! two!* At "one," the left foot is brought forward to its original position, with the knee well bent and turned outwards. At "two," the standing position is resumed by bending the arms, straightening the left leg, and bringing the right foot up to the left. Later, the exercise is carried out on the commands: *Forward hanging—down! Stand—up!* Fig. 71.

33. In the **B. Hg. position** the following exercises can be carried out:—

(a) **Quick Head turning (1–4).**

(b) **Quick hand slapping on the beam, or on the ground when the beam is set low.** To steady the body in these movements the feet are separated to the astride position after the B. Hg. position has been taken. *With a jump, feet astride—place! Slap the beam with the left (right) hand—go! Three times—go! Slap the ground with the right (left) hand—go!* The body will turn slightly in making the movements, but the straightness of trunk and legs must not be lost.

(c) **Alternate Leg raising.** *Alternate leg raising, by numbers—one! two! three! four! Repeat—one! etc.* At "one," raise the left leg as high as possible, knee and ankle stretched. At "two," replace the heel on the ground. At "three" and "four," the movements are repeated with the right leg. When one leg is raised the opposite hip joint must not be allowed to bend nor the body to turn. (Fig. 69.)

(d) **Heaving.** *Heave! Lower!* Bend the arms and raise the body until the chest touches the beam. Press the elbows outwards and keep the body straight. The hands should be rather farther apart than the width of the shoulders. Fig. 70. When the chest is heaved up to the beam, alternate leg raising can be carried out as in (c).

34. (Bt.B.Hg.) **Tr. rais.**

The starting position is taken by grasping the beam, taking the Fl. Kn. Bd. position, and then extending the legs forward under the beam with the heels resting on the ground. There is thus an angle between the trunk and the legs, and the trunk is more upright than in the B.Hg. position. Fig. 73. *Trunk raising, by numbers—one! two!* At "one," without sliding the heels forward, lift the hips until the body is in the B.Hg. position. At "two," return to the starting position.

Heaving can also be carried out in the Bt.B.Hg. position in the same way as in the B.Hg. position.

35. **Changing between the B.Hg. and the F.Hg. positions** can be carried out either by running the feet backward and forward with short quick steps, or by heaving with the arms and swinging the legs into position. The exercise starts from the B.Hg. position and

the beam at first should be at head height and should not be set lower than shoulder height. *Change to forward hanging with a run (with a heave)—go ! Return to backward hanging—go !* When changing with a heave, the chest is lifted to the beam and the legs are gathered up under the body, and as the body swings, the legs are quickly extended backward (or forward) while the body is lowered into the named position.

36. (F.Hg.) Heav. (:). (Wall bars, beam).

After the performers have taken the starting position with the hands well separated, the supporters stand behind them astride of their legs and place their hands lightly against the performers' elbows. *Heave ! Lower !* The performer raises the upper part of the chest towards the beam or wall bar by bending the elbows to a right angle, at the same time extending the ankles so that contact with the ground passes from the balls of the feet to the tips of the toes. The supporter draws the performer's elbows slightly backwards with a light pressure of the palms of the hands and keeps them back while the body is being lowered again to the starting position.

The exercise can also be taken without assistance. Fig. 72.

37. (B.Hg.-In.Gr.) Am. and Lg. walk b. (Beam at chest height).

Stand close to the beam, facing and at arm's length from one of the uprights. *Inward grasp !* Grasp with the hands close together and one on each side of the beam. *Heave backward hanging—down !* Take the position under the beam, feet towards the upright, chest close up to the beam. *Go !* Move backward along the beam, hand over hand, keeping the chest in contact with it and walking backwards with the feet at the same time. The opposite hand and foot should move together. With practice, the length of the steps can be increased. *Stop !* (before the head touches the opposite upright). *Up !* Stand up beside the beam. *Next—grasp ! Down ! Go ! etc.* Fig. 74.

V. CIRCLING.

Circling is an attractive but difficult exercise for younger boys, who are apt to get confused when they find themselves for the first time hanging head downward. With practice, however, this soon passes off, and the Agility Exercises, which are started in the second year, help in the cure.

During the first three years it will be found helpful if the boys occasionally work in pairs, one assisting the other, either by guiding his legs or by giving the slight push at the critical moment (often little more than a touch is needed), which ensures success.

In most of the exercises the command is : *Circling up (or down) —go !*

It should be a fixed rule that whenever the circling requires the head to move forward over the beam, the beam must be grasped

with the thumbs on the opposite side to the fingers in order to prevent the hands slipping off it. The thumbs must, of course, join the fingers as the head goes below the beam, but by this time the fingers are bent and have a good grip.

38. (St.-Rvs.D.Gr.) Circl. d. with bent knees and hips. (Beam a little under hip height).

Stand close to the beam and grasp it with fingers behind and thumbs in front, and with the hands touching the thighs. Lean over the beam as far as possible, bringing the chin on to the chest and looking at the knees. Then bend the knees and bring the heels up to the seat. This allows the weight of the head and trunk to bring the thighs and legs over the beam. The body should be kept in this curled-up position until the feet touch the ground. It assists the boys to do this if they are told to follow the knees with the eyes, and as they feel the feet coming down to pull the chest to the beam so that they can look over it. Fig. 75.

39. (Fr.St.-Tr.D.-B.Gr.) Lg. rais. to Rvs. Hg. posn. (Wall bars).

Stand one foot away from and facing the wall bars. Bend the trunk forward and downward until the back of the neck rests against the bars. Then raise the arms backward and upward, and grasp a bar with the palms of the hands turned towards the wall and the thumbs round the bar. Be careful that the hands grasp the same bar. Then, with a little jump, throw the legs above the head until they rest against the bars. To return to the standing position, lower the legs slowly and when the feet reach the ground let go the bar, one hand at a time, and stand up. Fig. 76.

40. (St.-Ft.F.-Ur.Hv.Gr.) Circl. u. and d. with help of feet on upper beam. (Two beams, the lower at chest height, the upper two feet above it).

Stand close to the lower beam with one foot advanced and take under-grasp. Throw the legs up and get the heels behind the upper beam; press with the heels and pull with the arms, and circle up on to the lower beam in Bal. Sup. position but without changing the grasp of the hands. Circle down as described above.

This exercise can be introduced with the lower beam at hip height. Kn. Fl. Bd. position is taken with the feet under the beam and with the beam pressed to the chest with under-grasp. From this position practice throwing the legs up to the beam with bent knees, and if possible straighten the knees and pull over the beam to standing position on the other side.

41. (St.-Ft.F.-Ur.Hv.Gr.) Circl. u. (Beam).

As in the preceding exercise but without the assistance of an upper beam. When the body is over the beam, reverse the grasp before pressing up to the Bal. Sup. position. The standing position can be returned to either (1) by circling forward: first resting on the

beam with the trunk forward and the hips bent, then reversing the grasp and circling down as described above, or (2) by dismounting with a jump backwards.

42. (St.-In.Hv.Gr.) Circl., and later return circle (2 ropes).

Grasp the ropes level with the shoulders. With a jump and a pull with the arms bring the knees up to the face; sink back by straightening the arms and throw the head back. This will bring the legs over. Straighten the legs, place the feet on the ground, let go the ropes and stand up.

Later, instead of letting go the ropes, a return circle can be made by bringing the chin to the chest, drawing the knees up to the body and keeping them there until the head is upright. A little jump with the feet assists the return circle.

43. (St.-In.Hv.Gr.) Circl. to "swallow's nest." (2 ropes).

Circle as in the preceding exercise, but as the knees come between the ropes turn the feet outwards and hook the insteps round the ropes, close above the hands, then continue to circle with the body as far as possible.

44. (St.-In.U.Gr.) Circl. (2 ropes).

The grasp is taken at stretch height. The legs, kept straight, are swung up and over. The arms are not bent.

45. (St.-Ur.Gr.) Circl. u. and d. (Beam).

Raise the legs until the insteps touch the beam, knees straight, then pull with the arms to bring the legs over the beam, and finally reverse the grasp and straighten up to the Bal. Sup. position. Circle down with bent knees as described above. Later, the exercise can be carried out from the Hg.-Ur.Gr. position. Fig. 77.

46. (Bal.Sup.) Circl. d. with straight knees.

Rest the body on the beam with the trunk forward, thighs bent, and legs straight; reverse the grasp, bend the head down under the beam and let the legs, held straight, slide over the beam until the body hangs by the straight arms with the insteps to the beam. Then lower the legs quietly to the ground.

47. (Hi.Sit.) Circl. down b.

Take the starting position from Bal. Sup. position, and grasp the beam with the fingers forward and the thumbs behind. Take the weight of the body on the arms and straighten out the body, then incline the body backward with the small of the back resting on the beam. Bend the knees to prevent the body from swinging back too fast. When the body is vertical, head downwards and arms fully extended, bring the knees, well bent, down to the chest; then straighten the legs downwards until the feet touch the ground, or until the body is fully extended. Let go the beam and stand up, or drop to the ground. Fig. 78.

48. (Hi.Sit.) Circl. b. to Rvs. Hg. posn., and return. to Hi. Sit. posn.

After the body has sunk back until the arms are vertical, as in the preceding exercise, throw the head backward, hollow the back, straighten the hip and knee joints, pull strongly and evenly with both arms until the buttocks have just passed over the beam, then put the thumbs over the beam, bring the head forward, and as the legs descend and the trunk rises push up with the arms and return to the sitting position.

VI. CLIMBING.

Few exercises compare with climbing as a means of cultivating general nimbleness, neatness of movement, and the sureness of hand and foot that gives confidence at a height. Climbing exercises appeal to some primal instinct in boys, who find them specially attractive.

(i) Horizontal Climbing along Wall Bars.

49. (Hi.St.-Hv.Gr.) Hz. climb. (Wall bars).

The starting position is taken by standing on the bars with the chest close to them, and grasping a bar at about shoulder height.

The movement may be taken in free form, the only condition being that the leading hand and foot shall not be crossed by the other hand or foot. In this form it is convenient to take the exercise in stream. Later, it may be taken more formally, every alternate section of wall bars being occupied by a boy. At the command *One!* the leading hand and foot move together about 12 inches; at the command *Two!* the following hand and foot move together the same distance. The tendency is to move the foot farther than the hand. The chest must be kept close to the bars. Later, the steps may be lengthened. The exercise should be taken in both directions. Fig. 79.

A more advanced form is to move both hands together and then both feet, so that at each alternate movement the whole weight of the body is thrown on the bent arms. Lean slightly away from the bars, then with a pull of the arms shift the grasp about 6 inches in the named direction, then take the weight on the arms and shift the feet 6 inches beyond the hands, and so on. The length of the steps may be gradually increased.

(ii) Ladder Climbing.

50. It should be explained to the boys that in climbing and descending any kind of ladder the opposite hand and foot always move together, and that by this method the body is at all times supported on both sides and will not swing off to the side of the apparatus in the event of a slip.

On vertical wooden ladders the hands grasp the rungs, on rope ladders the side ropes just above the rungs, on inclined ladders they

are hooked round the side pieces. In climbing and descending all vertical apparatus, the body should be kept close to the rungs and the elbows and knees spread out sideways.

Preparatory climbing exercises on wall bars are of value in teaching the hands and feet to work together, and the feet to find their hold at the right height without the help of the eyes. Climbing can be taken in various ways : in free form, to give initial and independent practice in the movements ; formally by numbers, to secure correct form ; in stream ; as a race on the wall bars (but not on any other kind of apparatus).

Climbing up by numbers—one ! two !

Stand with the chest close to the wall bars or rungs, and grasp a bar or a rung at eye height with both hands. At "one" shift up the left hand three or four bars, or to the next rung, and at the same time place the right foot on the third or fourth lowest bar, or on the lowest rung ; at "two" straighten the right knee, pull with both arms, and shift up the right hand and left foot ; and so on. *Stop !* Bring both hands and both feet to the same bars, the hands at eye height. Fig. 80.

Climbing down by numbers—one ! two ! At "one" shift the left hand and right foot down three or four bars, or to the next rung, bending the left knee and straightening the right arm ; at "two" shift the right hand and left foot down, and so on.

51. (Fr.St.—Hv.Gr.) Climb. u. wall bars, both feet then both hands moving together.

Stand close to the bars grasping one at eye height. Shift both feet on to the lowest bar ; let the chest come away from the bars a little, pull sharply with the arms and shift the hands to the next bar above ; then shift the feet up one bar, and so on.

(iii) Rope Climbing.

Boys under 12 years of age should not be taught rope climbing as a definite exercise, because they have not the strength for lifting the knees and heaving with the arms, and cannot retain a reasonably good carriage of the chest. They may, however, be given opportunities to hang and swing on ropes and to make attempts at climbing, e.g. during the few minutes before the lesson begins and in the Hanging Catch Game.

The commands used in the definite instructions are : *Grasp ! Climb ! Halt ! Down !* ; also *Make fast !* and *Climbing position !*

52. Preparatory climbing positions on two ropes.

Stand between the ropes and grasp them as high as possible. *Grasp with the legs—up !* Pull a little on the arms, lift the feet and turn the knees out, get both ropes over one instep, then cross the other foot in front, getting its heel well under the outer ankle bone of the back foot ; grip the ropes by pressing the knees and the feet

together. Thrust the feet forward beyond the knees so as to bring those parts of the ropes which pass between the thighs close up to the knee joints where they can be firmly gripped. *Down!* Lower the feet to the ground. Practice several times, first with one foot behind the ropes and then with the other.

The leg grasp is difficult for boys, and a useful method of teaching it to them is as follows. Two benches, one on top of the other, are placed close to the ropes; the boys sit on these and grasp the ropes as high as they can. They then practice the leg grip without throwing any weight on the arms. When the leg grip is understood, its strength may be tested by lifting the seat and swinging on the rope, and the correct use of the legs in climbing can be taught on the commands: *Heaving by numbers—one! two!* At "one" heave up with the arms and push up with the legs without losing the grip of the feet and knees. At "two" extend the arms, bend the knees and sit on the bench again. A stout stick about 3 feet long is also useful for teaching the leg grip.

53. Climbing two ropes.

Climbing by numbers—one! two! At "one" bend the arms, raise the knees as high as possible and grip the rope with the legs as described in the preceding exercise. At "two" make a couple of shifts upward with each hand until the whole body is fully extended along the rope. Repeat the movements, at "one" relaxing the grip of the legs sufficiently to allow the ropes to run between them as the knees are raised. Figs. 81 and 82.

Descending by numbers—one! two! three! At "one" slip the left hand down and grasp again at chest height. At "two" slip the right hand down to the left. At "three" relax the grip of the legs so that the ropes may run between them and lower the body by extending the arms. Then grip with the legs again. In descending the legs remain extended.

54. Preparatory climbing positions on one rope.

These are taught in the same way as the positions on two ropes, except that the hand which is to take the upper position is named.

55. Climbing one rope.

In climbing, the procedure is the same as on two ropes, except that three upward shifts of the hands are made in order to extend the body on the rope, i.e. if the right hand is over the left, the left hand is shifted up, then the right hand is shifted up as high as possible, and the left hand is shifted up above it. Figs. 83 and 84. Descending can be done in the following ways: (1) grip with the legs and shift the hands down the rope, allowing the hip and knee joints to bend; then, retaining this position, relax the grip of the legs and descend by shifting the hands one below the other; (2) with the body extended along the rope and a grip with the legs,

slip the lower hand down to chest height, and then bring the upper hand down to it. Then relax the leg grip and lower the body by extending the arms, and so on.

56. Making fast on two ropes.

Stand between the ropes, jump up and grasp a rope in each hand with the arms bent and the body and legs extended along the rope, take a firm grip with the legs without raising the knees, let go with the right hand and bring the arm round in front until the rope is just behind the armpit, then extend the arm sideways and press it back against the rope ; do the same with the left arm, and straighten up the body. To return to the climbing position, bring back one arm at a time and grasp the ropes again. Fig. 85.

57. Making fast on one rope.

Jump up and grasp the rope as high as possible with the arms bent and the body and legs extended along the rope. Separate the legs, letting the rope hang between them ; bring the right leg forward and curl it round the rope so that the rope passes between the thighs, round the back and the outside of the right leg, and over the instep of the right foot. Place the left foot with the toes pointing to the right down on the rope as it passes over the right instep. Test the grip of the legs, then take the right hand off the rope and bring the arm round in front of it, extend the arm sideways and press it backward so as to hold the rope behind the armpit. Then take the left hand off the rope and stretch the arm sideways, at the same time extending the whole body strongly. To return to the climbing position, grasp the rope first with the left hand, then with the right, kick the rope clear of the legs and take the ordinary leg grip, extend the arms and stand on the ground. Fig. 86.

Making fast can be done with the left leg curled round the rope and the left arm pressing against it.

58. Climbing horizontally along a line of ropes.

Hang at full stretch on one rope with leg grip, reach out with one hand and grasp the next rope at the same height, transfer the legs to this rope and then the other hand, and so on.

Later, this exercise can be done with the arms bent, and the grasp at the level of the chest, and later still with the arms straight and with a heave and lower between each pair of ropes when the legs are hanging free.

59. Climbing diagonally downward along a line of ropes.

Climb up the rope at one end of the line and take the leg grip with body and legs extended along the rope and the hands grasping at chest height. Reach out one hand and grasp the next rope somewhat lower down, then transfer the legs to this rope, straighten the arm on the first rope and allow the legs to slide down the second rope, finally transfer the hand on the first rope to the second.

60. Climbing diagonally upward along a line of ropes.

Hang at the bottom of the end rope with bent arms and the legs extended and gripping the rope. Grasp the next rope as high as possible with one hand, then transfer the legs to this rope, raising the knees as in climbing one rope. The hand remaining on the first rope is now transferred to the second, and takes the first shift upward in straightening out the body. The passage to the third rope is made in the same way. Later, the hanging position with one arm bent and the other extended upwards can be held for a moment between each pair of ropes.

(iv) *Twisting in Window Ladders.*

These exercises are specially useful with younger boys because a considerable amount of general activity is demanded, while the amount of work done respectively by the arms and legs can be easily regulated. The exercises can all be taken during the first four years, and for subsequent use they can be rendered more difficult by eliminating the use of the feet.

These exercises, besides producing the characteristic heaving effects, have considerable value as Abdominal and Lateral exercises ; they give suppleness through a combination of trunk rotation and side bending, and tend to "round off the corners."

The "Ready" position is taken by sitting on one of the rungs with the hands grasping the rung in front of the face. If the climbing is commanded by numbers the count "one" is used for shifting the hands, and "two" for twisting the body until it comes to rest again in another square of the ladder. Later, the command *One shift—go!* can be used, and later still the simple direction *Climb!*

The boys should be allowed to climb informally to the "Ready" position for exercises which start from the middle or upper part of the ladder, and to climb down informally when exercises finish near the top.

In all ascending exercises with the head leading, the body is carried upward, by a heave of the arms, with or without the assistance of the feet into the square below the rung which the hands are grasping. In descending, the feet are first directed into a lower square and then the body is lowered by the arms until it comes to rest in this square. A twist of the body to the left or right always accompanies the heaving or lowering, and the body comes to rest facing alternately in opposite directions. The hands in grasping a rung should be as widely separated as possible.

Unless otherwise stated, the directions given below are for twisting towards the left side only ; and in describing the positions of the hands, that of the hand, whether left or right, which is placed nearest to the upright on the left side of the body is given first. The position of the rung to be grasped for each twist is given in

relation to the rung in front of the face when the body is at rest in a square. For twisting to the right, transpose the words "right" and "left" in the descriptions.

61. (Sit.) Hz. twist., Hd. leading.

Grasp the same rung on the other side of the upright, under-grasp with the left hand, over-grasp with the right hand ; twist into the next square to the left, dipping the head under the rung grasped by the hands. Fig. 87.

62. (Sit.) Vert. twist. u., Hd. leading.

Grasp the next rung above, under-grasp with the right hand, over-grasp with the left hand, arms crossed. With a twist to the left, heave up into the next square above. Heave into the next higher square with twist to the right, and so on alternately twisting left and right. This exercise can be combined with the next. Fig. 88.

63. (Sit.) Vert. twist. d., Ft. leading.

Grasp the rung in front of the face, under-grasp with the right hand in front of the left shoulder, over-grasp with the left hand in front of the right shoulder, arms crossed. Slip the insteps over the rung below that on which the body rests, twist down into the next square below, turning to the left. This uncrosses the arms. The left hand now has under-grasp, the right over-grasp. Move the hands down to the rung in front of the face with the same grasp, but with the arms crossed. The hands are now in position for twisting down into the next square, but turning to the right ; and so on, twisting alternately to left and right.

64. (Sit.) Diag. twist. d., Ft. leading.

Grasp the rung in front of the face, under-grasp with the right hand in front of the left shoulder, over-grasp with the left hand in front of the right shoulder, arms crossed. Pass the feet round the upright to the left and slip the insteps over the rung diagonally below that on which the body rests. Twist down diagonally to the left. This uncrosses the arms. The right hand now has over-grasp, the left under-grasp. Shift the hands to the rung in front of the face with the same grasp, but with arms crossed. The hands are now in position for twisting into the next square diagonally downward and to the right ; and so on, twisting alternately to the left and right. Fig. 89.

For convenience of class arrangements it may be desired to limit the excursions of each boy taking part in the exercise to two vertical divisions of the ladder. If this is the case, the body must twist in the same direction at every shift, and this will necessitate a transposition of the grasp of the hands as they are brought down from one rung to another, and not merely a crossing of the arms, so that the same grasp may be taken for each twist.

65. (Sit.) Hz. twist., Ft. leading.

Grasp the rung in front of the face, right hand with under-grasp in front of the left shoulder, left hand with over-grasp in front of the right shoulder, arms crossed. Pass the feet round the upright and over the rung next to the left of that on which the body rests. Twist into the next square to the left. Transfer the hands with the same grasp, but with arms crossed, on to the rung in front of the face ; they are then ready for a twist into the next square on the right. Fig. 90.

66. (Sit.) Diag. twist. u., Hd. leading.

Grasp the next rung diagonally above and to the left, left hand with under-grasp, right hand with over-grasp, arms crossed. Twist into this square. This uncrosses the arms. The left hand now has over-grasp, the right under-grasp. For the next twist upward to the right, the hands are shifted up with the same grasp, but with the arms crossed ; and so on, alternately to left and right. Fig. 91.

67. (Sit.) Diag., twist. d., Hd. leading.

Retaining the grasp of the right hand, shift the left hand to under-grasp on the rung to the left of that on which the body rests, and close to the upright, at the same time allow the body to slip backwards until the rung is behind and gripped by the bent knees. Pass the head and shoulders under the rung grasped by the left hand, transfer the right hand to over-grasp on this rung, pull with the arms and bring the body into the square, allowing the legs to slide off the rung above but keeping the knees well up. Fig. 92.

COMBINATIONS OF EXERCISES.

68. (Bal.Sup.-Rvs.Gr.) Circl. d. to St.-Kn.Bd.-Ur.Gr., throw legs f. to B.Hg.-Ur.Gr., and circl. u. to Bal.Sup., dismt. by jump. b.

This is given as an example of the merging of one exercise into another to obtain the continuity of movement which is discussed on page 3.

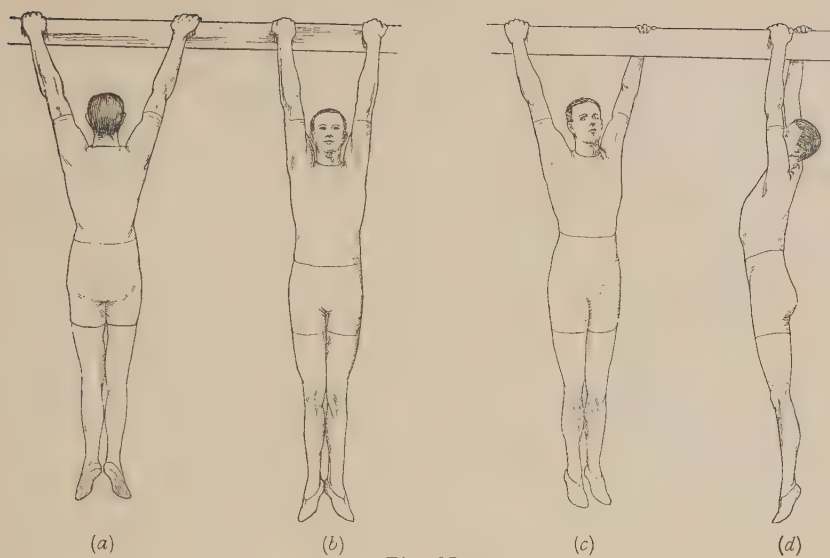


Fig. 65.

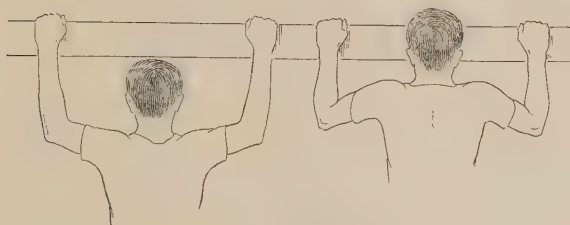


Fig. 66.



Fig. 67.

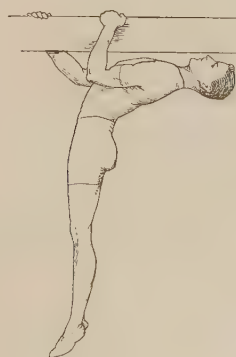


Fig. 68.

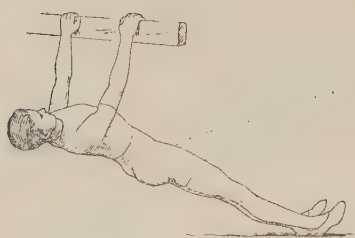


Fig. 69.

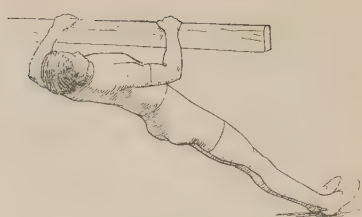


Fig. 70.



Fig. 71.



Fig. 72.



Fig. 73.

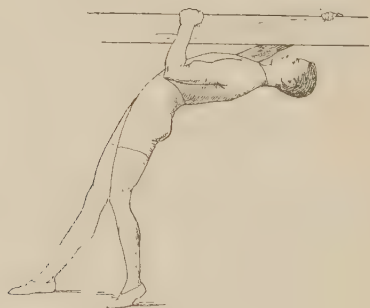
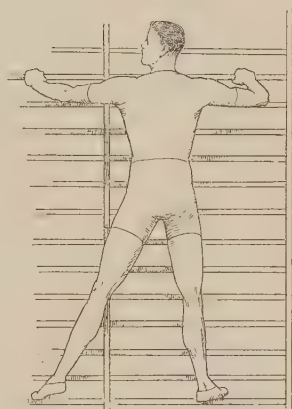
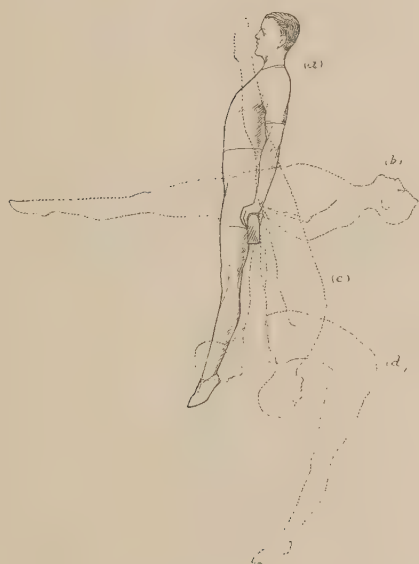
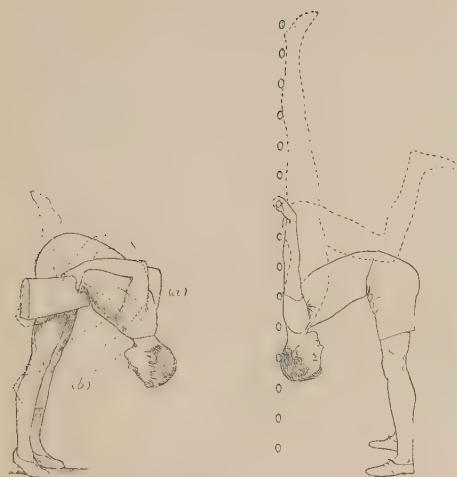


Fig. 74.



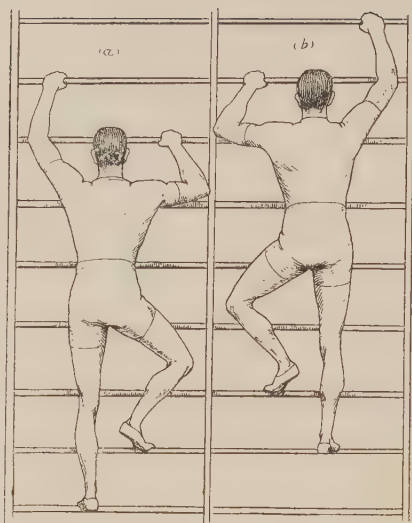


Fig. 80.



Fig. 81.



Fig. 82.



Fig. 83.



Fig. 84.

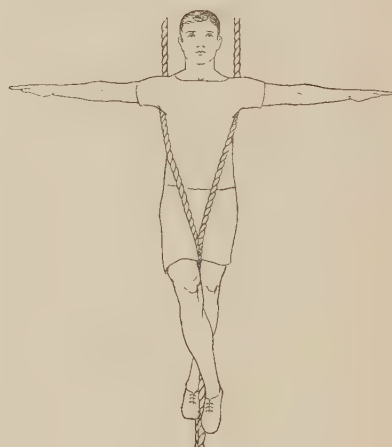


Fig. 85.



Fig. 86.

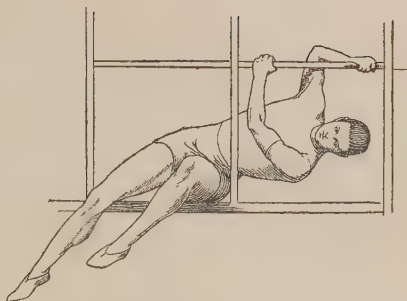


Fig. 87.



Fig. 88.

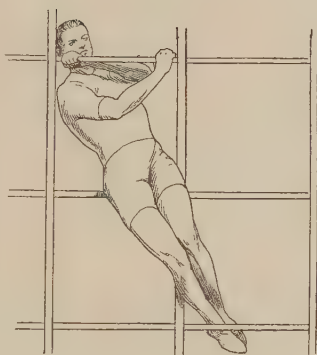


Fig. 89.

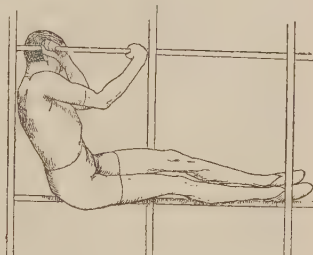


Fig. 90.

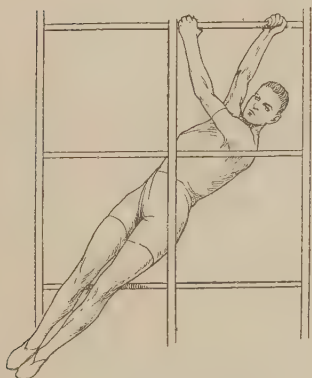


Fig. 91.

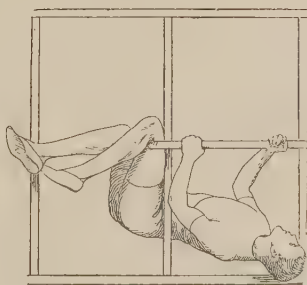


Fig. 92.

CHAPTER IX.

BALANCE EXERCISES.

While other types of exercises, notably the Leg, the Dorsal, the Abdominal and the Lateral Exercises, are employed, each in its own sphere of action, to strengthen the muscles concerned in holding the body upright and to effect the muscular adjustments necessary to a good carriage, the function of the Balance Exercises is to establish amongst all these muscles the concerted action, the effective team work, which results in an erect, well-balanced and easy carriage of the body. The purpose of the Balance Exercises is to cultivate the sense of posture and balance, and the wide-spread muscular co-ordinations on which this sense is based. This is effected by means of exercises in which the accustomed base of support is so much diminished as to make the maintenance of the balance a matter of concentrated attention, and by requiring the performer to hold himself well while maintaining his balance. The base of support is diminished either by removing one foot from the ground or by standing on the edge of a beam or on the balancing rib of a bench. The difficulty of keeping the balance is progressively increased in various ways : by placing the arms in higher positions and so raising the centre of gravity of the body, by moving the head, the arms or the free leg and so actively disturbing the balance, by increasing the height of the apparatus and with it the mental effect of urgency in the preservation of the balance.

In order to maintain the balance, every movement which tends to disturb it must be accompanied or immediately followed by a compensating movement in the opposite direction, which keeps or brings back the centre of gravity over the base of support. The compensating movements of the beginner usually follow too late on the disturbance of the balance, and therefore have to be large, and as a consequence are difficult to control. Hence the balance of the beginner is often insecure and may be suddenly lost beyond recovery. The apparatus on which he practises should therefore be set low. But with practice his readjustments become better timed and proportioned, until in the well-trained performer they are so immediate and accurate as to give great command over the balance, and to create the impression of concentrated immobility or of purposeful movement perfectly controlled. Exercises on higher apparatus may then be attempted with safety.

I. GAME FORMS.

These exercises are carried out informally and without definite commands.

1. Grasp one foot raised backward.

Raise the left foot backward and grasp the toes with the left hand. Place the foot down and hold the other. Later, hold one foot and hop on the other.

2. Raise one knee to the forehead with the help of the hands.

Raise one knee and pull it up with the hands to touch the forehead. Keep the standing leg quite straight.

3. Hop round on spot, holding one foot behind with the opposite hand.

Turn right round one way, then change the feet with a little jump, and turn round the other way.

4. Hug the Knee.

Raise one knee, put the arms round it and hug it to the chest. Keep the standing leg straight and the body as erect as possible. Later, hug the knee and then hop on the spot, stop in balance, put the foot down, hug the other knee, and hop again.

Later, hop on the spot with one foot raised free, at whistle stop in balance and hug the knee of the free leg without putting the free foot down.

5. Hopping charges.

The boys in two extended ranks. At the whistle, the ranks charge each other, the boys hopping on one foot with arms folded across the chest. The object is to put the opponent out of action by making him place the raised foot on the ground, either by charging him with the shoulder or by dodging his charge and upsetting his balance. Everyone must keep on hopping. Repeat, hopping on the other foot.

6. Stand on one leg, holding the other ankle in front with the opposite hand, and change feet and hands.

Keep the back as straight as possible. Change the feet and hands slowly at first, later quickly and with a jump. A short hopping race with the foot held in this way can be arranged.

7. Hopping wrestle.

The boys in pairs. Opponents, standing on one leg with the other foot free or held behind by one hand, face each other and hook one or two fingers together or grasp hands. At a signal, each endeavours to upset the other's balance and make him put the free foot down, hopping meanwhile to maintain his own balance.

8. Crow hop.

Hop about in the Kn. Fl. Bd. position, with the arms free to keep the balance. At a later stage the exercise can also be done with quick head turning in four movements to each four hops, i.e. left, front, right, front. With older boys this can be taken either on the spot or moving forward, backward or sideways.

9. "Cat crawl."

Crawl along a low beam or the balancing rib of bench on the hands and feet.

10. Kick the hand.

This can be done with the arm extended sideways (see Lateral Exercise 19), or forward. The endeavour is made to kick the hand without lowering it, and without shifting the other foot.

11. Limping in a ring.

A circle 6 to 8 feet in diameter is drawn on the ground. In this two boys stand with folded arms and one foot raised. At a signal they begin to hop and by charging or dodging try to make their opponent step out of the ring. If either has both feet on the ground he is disqualified, but the feet may be changed with a hop. A number of circles may be drawn and team competitions held.

12. Hopping tug-of-war.

Two boys face each other, clasp right or left hands and raise one foot. At a signal each tries to push his opponent back to his own wall or across a line, hopping all the time. Both feet must not be on the ground at the same time but the feet may be changed with a hop. The free arm and leg must not be used against the opponent.

II. EXERCISES ON THE GROUND.

(i) *Knee Raising and Movements in Kn. Ra. Position.*

13. In knee raising the knee is raised forward until the thigh is horizontal. The lower leg is kept in a vertical position, and the ankle is fully stretched as the foot leaves the ground. The commands for knee raising are : *Left (right) knee—raise ! Knee—lower ! or Alternate knee raising by numbers—one ! two ! three ! four !* At "one" and "two" the left knee is raised and lowered ; at "three" and "four" the right knee. Fig. 93.

The exercise is taken first from the St.-ToeF. position (see Leg Exercise 3) as in this position the body is already balanced on the standing leg before the knee is raised.

These exercises are made progressively more difficult by placing the arms in the Hn.Hp., Am.S., Nk.Rst. and Am.U. positions, and by combining the knee raising with arm raising sideways at the command : *Knee raising with arm raising sideways, by numbers—one ! . . . four !* The arms are raised and lowered with the knees.

Marking time with high knee raising is an exercise that can be introduced very early, because there is little difficulty about the balance and emphasis can be laid on keeping the back straight. *With high knee raising, mark—time ! Class—halt !* The knee is raised as high as possible while keeping the body erect. The exercise can be taken at first with the hands grasping a beam or wall bar.

14. (St.-Kn.Ra.-Hn.Hp.) Ak. bend. and stretch.

Ankle bending and stretching—begin! Stop! Each boy, taking his own time, bends and stretches the ankle of the raised foot, pointing the toes alternately up and down. Change feet and repeat.

15. In leg stretching backward from the Kn. Ra. position the foot is carried backward, the knee is well stretched, and the leg is lifted backward as high as possible without disturbing the carriage of the body. (Fig. 93.)

In leg stretching forward from the Kn. Ra. position the knee is stretched with the foot turned a little outward, and the leg is kept as nearly horizontal as possible. The tendency to bend the knee of the standing leg and to round the back must be resisted. (Fig. 93.)

The commands for these movements are: *Left (right) leg backward (forward)—stretch! Knee—bend!*

Leg stretching backward and forward from the Kn. Ra. position can be combined with arm movements, e.g. **(St.-Kn.Ra.-U.Bd.) Leg. stretch. b. and f. with Am. stretch u. and s.** (*Arms upward bend and left knee—raise!*) *Arms upward and leg backward—stretch! Arms and knee—bend! Arms sideways and leg forward—stretch! Arms and knee—bend!*, or *Arm stretching upward and sideways with leg stretching backward and forward, by numbers—one! . . . four!*

Leg stretching backward and forward can be taken in sequence with knee raising, e.g. **(St.-Hn.Hp.) Kn. rais. and Lg. stretch. b.,** at the commands: *Knee raising and leg stretching backward by numbers, left knee—one! . . . four! Right knee—one! etc.* These exercises can also be combined with arm movements, e.g. **(St.) Kn. rais. and Lg. stretch. f. with slow Am. stretch. u.** taken by numbers. At “one” the knee is raised and the arms bent, at “two” the leg is stretched forward and the arms upwards, at “three” the knee and the arms are bent, at “four” the knee is lowered and the arms stretched downward.

16. (St.-Asd.-Hn.Hp.) Kn. rais.

Left knee—raise! Knee—lower!, or *Left knee raising, by numbers—one! two!* At “raise” or “one” keeping both knees straight, push the weight of the body over on to the right foot by quickly stretching the left ankle, and without pause raise the left knee to the position described in Exercise 13. At “lower” or “two” stretch the left leg sideways and let the body fall back on to the left foot in astride position. Later, this exercise may be done rhythmically, at the commands: *Begin!* and *Stop!* The exercise may be introduced from the St.-Toe S. position; compare with Exercise 13.

17. (St.-Wd.Asd.-1 Kn.Bd.-Hn.Hp.) Rhyth. Take-off with Kn. rais.

Take-off with knee raising, left (right) leg—begin! Stop! (See Leg Exercise 11.) Take off with the left foot with sufficient energy

to throw the weight of the body into balance on the right leg, and as the body moves to the right raise the left knee. Hold the Kn. Ra. position for a second or two, then stretch the left leg sideways and let the body fall to the left, bending the left knee as the foot comes to the ground in the Wd. Asd. position, and so on. Keep the trunk erect throughout. Later, starting with the arms stretched sideways, the arms are bent as the knee is raised and stretched sideways as the foot is placed down.

18. (St.-Kn.Ra.-Hn.Hp.) Toe lung. b.

Backward lunging—begin! Stop! Feet—change! Incline the body forward and carry the leg back to the Toe Ln. position (see Leg Exercise 20), then return to the St. Kn. Ra. position, and so on, making the movements in a fairly quick tempo but pausing in each position to make sure of the balance. In lunging, the knee of the standing leg should be bent outwards.

Later, starting with the arms bent upwards, stretch the arms sideways or upward as the lunge is taken, and bend them as the knee is raised.

(ii) Leg Raising and Carrying.

19. In leg raising sideways the leg is carried directly sideways, not at all forward, and as high as possible without tilting the shoulders to the opposite side. As the leg is raised the weight of the body is transferred to the other leg by carrying the hips sideways, with the trunk erect above them. The last part of the leg raising is effected by tilting the hips, but as the shoulders must be kept level, the tilting is effected by a contraction of the muscles on the side of the trunk and is accompanied by a lateral flexion of the loins. As the leg is raised the ankle is fully stretched. Fig. 94.

The easiest form of the exercise is quick leg swinging sideways and downward, without pausing with the leg raised. This may be accompanied by arm swinging sideways as the leg is raised and downward as the leg is lowered. The arms when raised will show whether the shoulders are level or tilted. *Left leg (and arms) swinging sideways and downward—go! Right leg—go!*

A more difficult form of the exercise is to swing the leg sideways, pause in full balance, and then lower the leg slowly; e.g. *Quick leg and arm swinging sideways, slow leg and arm lowering, by numbers, left (right) leg—one! two!*

A still more difficult form is shown in the following exercise: (St.-Lg.S.-Am.S.) **Lg. swing. d. and u.**, at the commands: (*Left leg and arms sideways—raise!*) *Leg and arms swinging downward and upward—go!* The foot when lowered is not placed on the ground. The exercise can be taken at first without lowering the arms. The leg must be checked and held at the top of its upward swing without movement of the remainder of the body.

Leg raising sideways slowly is taught first from the St.-ToeS. position (compare Exercise 13), because in this position the

transference of the balance to one foot has already been effected before the leg is raised, and it is thus easier to secure the correct carriage of the body during the movement. Later, the exercise is taken from the St. position with leg raising and simultaneous weight shifting as explained above. The commands used are: *Left (right) leg sideways—raise! Leg—lower!* These movements of the leg may be accompanied by arm raising sideways or sideways and upward, as described above, or by arm stretching; e.g.: *With arm raising sideways (and upward), left leg sideways—raise! Leg and arms—lower! Leg raising sideways with slow arm stretching upward, by numbers, left leg—one! two! Right leg—three! four!*

In the exercise (**St.-Lg.S.-Am.S.**) **Am. circl. spirally**, the shoulders must be kept level and the leg fully raised during the arm movements. (See Arm Exercise 43.)

20. Leg raising forward is taught from the St.-Toe F. position, and then from the St. position. The leg is raised straight forward with the knee and ankle well stretched and the foot turned slightly outwards. The leg is carried as high as possible without bending the knee of the standing leg or rounding the back; both must be kept firmly stretched, and the difficulty of this may at first be mitigated by raising the leg to only a small height from the Toe F. position, and gradually increasing the height to which it is raised as the power to hold a good position is developed.

The commands used are: *Left (right) leg forward—raise! Leg—lower!* The movements may be accompanied by arm raising as in the preceding exercise.

21. In Leg raising backward, the leg, with knee and ankle fully stretched, is raised backward as high as possible without inclining the body forward. As in the St. position the hip joints are already fully extended, the movement can only take place by tilting the hips forward and rotating them sideways to a certain extent; and since the upper part of the trunk must be kept still, the actual movement takes place in the loins and is effected by the lower spinal muscles, the muscles which extend the hip joint merely holding fast. The tendency of this is to throw the trunk as a whole forward, which must be resisted by stretching the back strongly.

The commands used are: *Left (right) leg backward—raise! Leg—lower!*

22. Leg carrying between the Lg.F., Lg.S. and Lg.B. positions is done either slowly with an even continuous movement, or quickly with a swing. In both cases the leg is kept as high as possible in the positions and movements, the body is held erect with the back well stretched, and the standing leg is kept straight. As the leg is moved, counterbalancing movements are made with the hips. In moving the leg from one position through another to a third, the movement is continuous and no pause is made in the intermediate position.

The commands used are, e.g. : (*Leg forward—raise !*) *Leg sideways—carry (swing) !* *Leg forward—carry (swing) !*, or *Leg carrying (swinging) sideways and forward, by numbers—one ! two ! etc. (Leg—lower !)*.

Leg carrying is also taken in sequence with leg raising, and the movements of the leg can be combined with arm movements, e.g. : (**St.) Lg. rais. f., carry. s. and lower, with Am. rais. f., part. and lower.,** at the commands : *Left leg raising forward by numbers—one ! two ! three !* A distinct pause is made in each position reached. The respective arm and leg movements should be completed together.

23. (**St.—Low Hn.Hp.) Tr. lower. s. with Lg. rais.**

See Lateral Exercise 34. The exercise can also be taken with the right arm stretched upward when bending to the left, and vice versa.

(iii) *Balance Marching.*

24. **Marching on the toes along a line ; at signal turn about.**

This is a useful preliminary practice for marching along a beam. The feet must be kept on the line, and in order that the eyes may direct them the head may be bent forward slightly, but the back must be kept straight. The arms may be raised and moved as required for keeping the balance. At a signal, the performer turns about on both toes and steadies himself in balance before taking a step in the new direction.

25. **Low march.**

(*With heel raising, knees—bend !*) *Low march—begin ! Stop !* The arms are raised and moved as required for keeping the balance. The marching is done so that the head is kept constantly at the same level. One leg is advanced and the toes placed down, the weight of the body is then transferred to the advanced leg by partly extending the other, which is then advanced, and so on. The movements are slow and continuous. The knees should be turned well outwards, and the body kept erect with the head held high. The marching can be confined to one floor-board or to a line drawn on the ground.

26. **Slow march with hi. Kn. rais. and Lg. stretch. f.**

The knee is raised, then the leg is stretched and lowered with the foot turned a little outward, and as the foot approaches the ground the heel of the standing foot is raised and the body allowed to move forward on to the other foot as it is placed down ; the St.—Toe B. position now reached is retained for a moment, then the rear knee is raised and another step taken, and so on.

(iv) *Balance Lunge Position.*

27. (**St.—Toe Ln.—Hn.Hp.) Lg. rais. b.**

The starting position is taken as in Leg Exercise 20. *Leg backward—raise ! Leg—lower !* Raise the leg, allowing the trunk to

fall forward but keeping the back straight, until the heel of the raised foot is level with the shoulders. The leg must be kept in line with the body; and the knee of the standing leg, turned well outward, must not be allowed to straighten. Lower the toe to the ground, raising the trunk at the same time and keeping it in line with the leg. Fig. 95.

28. (St.—Toe B.—Hn.Hp.) Lg. rais. b. to Bal. Ln. posn.

To balance lunge position, left leg backward—raise! Leg—lower! The leg is raised and trunk lowered as in the preceding exercise, and at the same time the knee of the standing leg is bent outward. The standing leg is then stretched, the trunk raised and the raised leg lowered to the Toe B. position.

29. (St.—Toe B.—Am.S.) Advancing with Bal. Ln.

Advance with balance lunges—begin! Stop!

Advance the back foot three foot-lengths in front of the other, and as it is placed down bend the front knee, incline the body forward and raise the back leg. Hold the Bal. Ln. position for a moment, then straighten the standing leg and at the same time bring the body to the erect position, lower the raised leg and carry it forward three foot-lengths, and so on.

The arms can be raised to the Am. U. position as the body is lowered to the Bal. Ln. position, and lowered sideways as the upright position is resumed.

III. EXERCISES ON APPARATUS.

The bench and the beam are used for balancing exercises. The bench is used at first in a horizontal position with its balance rib uppermost; later, it can be hooked up in a sloping position and the flat top is then used as well as the rib. The beam is used with the flat edge upwards and quite low to begin with. It may occasionally be used at a low height with the round edge upwards.

As the boys gain proficiency, the height of the beam can be increased, though whenever a new exercise is taught it should be practised at first on the beam placed well below the height at which the boys are accustomed to take the better known exercises.

The art of balancing on the narrow support afforded by the beam or bench rib comes with practice. The boys should learn to place their feet exactly one in front of the other as they move along the beam and to feel whether the foot is fairly placed without having to look, to transfer the whole weight of the body deliberately and smoothly to one foot before removing the other from the beam, to hold the head high and *still* (the secret of success in balancing) with the eyes fixed on some point directly in front and at their own level, and to keep the ankles and hips in lively play. When facing along the beam or bench, efforts to restore the balance if endangered can be made with the arms and one leg and by movements of the body,

preferably of the hips. If the balance cannot be restored, the performer dismounts in different ways according to the height of the beam ; up to hip height he jumps sideways ; from hip to shoulder height he stoops down quickly, grasps the beam and jumps sideways steadied by the arms ; above shoulder height he drops to the hanging position or to the hanging position with one leg hooked over the beam. To keep the balance when facing at right angles to the length of the apparatus, small movements backwards or forwards are made with the arms and trunk, again principally with the hips. Whether facing across or along the apparatus, loss of balance can often be prevented by quickly bending the knees, thus reducing the height of the column that has to be kept in balance. If the balance is completely lost, a jump must be made, but at the greater heights it is nearly always possible for the performer, who would not be practising at these heights unless he had good control of himself, to catch the beam with one or both hands and so steady himself before landing on the ground.

(i) *Mounting to Balance Standing and Exercises in this Position.*

30. Mounting to Bal. St. is done in several ways, according to the height of the apparatus.

(a) Apparatus at or below knee height.—Stand with one side to the apparatus. At the commands : *Balance standing—up!*, place the nearest foot on the apparatus, then step up and place the other foot behind it. *Jump to the left (right)—down!* Repeat the mounting from the other side. Fig. 96(a).

If the position is to be taken facing across the apparatus, stand facing the apparatus, place the ball of one foot on it, step up and place the other foot on it. The knees should be slightly bent, the body upright, and the elbows raised sideways with the hands forward. Dismount by jumping forward. Fig. 96(b).

Several boys can mount and dismount at the same time ; they should dismount alternately on either side of the apparatus. Dismounting from the end of the bench rib can be done with a Downward Jump (see Leaping Exercise 36).

(b) Beam between knee and hip height, or a little higher. *Astride the beam—ready!* *Balance standing—up!* *With one hand (both hands) on the beam, jump to the left (right)—down!* Swing one leg over and stand or sit astride of the beam with the hands grasping it in front. When standing astride, at the command *Up!* throw the weight of the body forward on to the straight arms, place the ball of one foot on the beam as close as possible to the hands, turning the knee well outwards, then place the ball of the other foot as close as possible behind the first, also turning out the knee. Keeping the knees well bent, cautiously carry the seat backward until the weight of the body is equally on both feet and the hands have left the beam, then raise the body to the erect position, and finally straighten the knees. Fig. 97. When sitting astride of the

beam with the feet off the ground, swing both legs backward as the weight is thrown forward on to the arms, and bring up both feet on to the beam together. In dismounting, quickly bend the knees and grasp the beam with one or both hands, keeping the body as erect as possible, and then jump down.

(c) Beam above hip height.—When the beam is too high to swing a leg over from the ground, the Bal. Sup. position must first be taken, and from this the Asd. Sit. position. The Bal. Sup. position is reached either by vaulting, as in Leaping Exercise 44, or by circling up, as in Heaving Exercises 41 and 45; and dismounting is done either by jumping down (up to chest height) as in (b), or by returning to the Asd. Sit. and Bal. Sup. positions and circling down.

31. (Bal.St.) Kn. bend. and Kn. full bend.

These exercises are carried out as in the St. position. The knees are turned well out and the body kept erect. The exercises should be thoroughly practised, as they give confidence and security in taking the grasp for dismounting. In knee full bending the hands can be placed on the beam at each bending.

32. (Bal.St.) Kn. rais.

Carried out as in Exercise 13. Knee raising and leg stretching backward and forward can also be carried out as in Exercise 15.

33. (Bal.St.) Turning 90°, later 180°.

Raise the heels slightly and turn slowly on the balls of the feet towards the side of the rear leg.

34. (Hi.Hz.Knl.) Head wrestling.

This exercise is taken on a low beam. Two boys, facing each other and with their heads touching, make ready by grasping the beam, kneeling on it with one knee and stretching the other leg back along it. At the signal, each tries to upset the other's balance with his head, maintaining his own balance by gripping the beam and by movements of the free leg.

35. (Bal.St.) Toe Ln. b.

The position is taken as in Leg Exercise 20. The Bal. Ln. position can be taken from the Toe Ln. position as in Exercise 27 or from the Bal. St. position as in Exercise 28.

(ii) *Balance Marching and Running on Sloping Bench.*

36. Bal. march. f. and b.

Forward (Backward)—*march! Stop! Down!* The toe feels along the beam for the right stance and the weight is transferred from one foot to the other deliberately and smoothly. If the balance becomes insecure the marching is suspended until it is completely restored. At the end of the march the performer dismounts in the manner appropriate to the height of the apparatus (Exercise 30), or he may

turn 90° (Exercise 33) and jump down forward. The marching is done usually, and always at first, with the arms free ; when good balance has been acquired it may occasionally be taken with the hands on the hips, or (on a low beam) with the arms stretched upward.

In Bal. marching up and down on inclined bench-rib, the bench should be hooked up to the third or fourth wall bar, and later a little higher, but not so high as to involve any risk of the foot slipping. The performer descends by the wall bars, or holds them while turning about for the march down. In marching up, the steps may be fairly long, in marching down they must be short and the body must be held perfectly erect. Fig. 98. An attractive form of this exercise is balance marching on the see-saw bench. A bench is placed with its balance-rib uppermost, and another bench, also with its balance-rib uppermost, is laid across it to serve as the see-saw. The performer marches forward or backward up the see-saw to its centre, tilts it over gently with his weight, and marches down the other side.

Turning about is practised during the march. Two boys, one at each end of the beam, can start together, march forward to the centre of the beam, turn about and march back ; or one boy at a time can march forward to the centre of the beam, turn about and march backward over the remainder of the beam. Such exercises can be taken "in stream," and it is then often a saving of time to let the boys climb up the wall bars to step on to the beam.

A further development of turning on the march is given in the exercise **Bal. march. alt. f. and b., turn. about at each step.** The march proceeds from one end of the beam to the other, stepping forward, turning about, stepping backward, turning, and so on. The movements should be practised first on the ground or along the top of a bench. As the turns are all to the right if the left foot takes the first step, the next practice of the exercise should begin with the other foot.

37. Bal. march. f. with Ak. stretch.

With ankle stretching, forward—march! Stretch the knee and ankle as the leg is advanced and remain for a moment with the toe touching the beam (in Bal. St.—Toe F. position) before transferring the weight to the advanced foot. Transfer the weight by extending the rear ankle and again remain for a moment in the Bal. St.—Toe B. position, and so on.

38. Bal. march. f. with slight Kn. bend. and Ft. carry. along side of beam.

As the rear foot is taken off the beam, the knee of the standing leg is bent slightly and the free foot is carried along the side of the beam, and as it comes up forward the standing leg is straightened, lifting the moving foot high enough to be placed on the beam. The whole movement is a smooth and continuous dip and rise of the body.

39. Bal. march. f. with dropping on one knee.

Advance the foot as for an ordinary step, and when the toes have made contact with the beam slide the foot forward, at the same time bending the knee of the rear leg until it touches the beam, pause a moment, lift the knee and straighten the legs, and take the next step in the same way. Fig. 99.

40. Bal. march. b. with Kn. rais. and Lg. stretch. b.

The knee raising and leg stretching backward are carried out as in Exercise 15, then the leg is lowered to the Toe. B. position, the weight transferred to it, and the knee of the other leg is raised from the Toe F. position, and so on.

41. Bal. march. f. with Kn. rais. and Lg. stretch f.

The knee raising and leg stretching forward are carried out as in Exercise 15, then the leg is lowered to the Toe F. position, the weight transferred to it, and the knee of the other leg is raised from the Toe B. position, and so on.

42. Bal. march. with one Kn. bend, one Lg. rais. f., and Am. rais. f.

As the rear leg is brought forward for each step the knee of the standing leg is bent to a right angle and the arms are raised forward, the moving leg is raised, with knee and ankle stretched, until the heel is a few inches above the beam. A momentary pause is made in this position, then the standing leg is stretched and at the same time the advanced foot is placed on the beam and the arms are lowered. The body must be kept erect. Later, the leg may be raised as high as is possible without disturbing the position of the remainder of the body.

The knee bending, etc., should be practised at first with each leg without advancing.

43. Bal. march. with one Kn. fl. bend. and Am. rais. f.

At each step, as the rear foot is taken off the beam, the knee of the standing leg is fully bent, the arms are raised forward and the free leg, hanging by the side of the beam, is brought forward as required to assist the arms in keeping the balance. The standing leg is then stretched, the arms lowered, and the free foot lifted on to the beam. Fig. 100.

The knee bending, etc., should be practised at first with each leg without advancing.

44. Run. u. and d. sloping bench-top.

At first, the bench should be set at an angle of about 20°; later, its inclination may be gradually increased until a rapid sprint along the floor is needed to carry the performer to the top. For each angle of slope there is a certain initial speed which carries the performer to the top with the least effort. If the start is made with anything less than this speed the top is reached with a struggle and with the body bent forward. The boys must learn to adjust their

speed of approach to the angle of the slope, but as the high speed required for steep slopes makes straight running, sureness of foot and good balance imperative, they must learn to run on a bench set at a moderate angle until they have acquired these qualities.

The run up is made with long, light and bounding steps; the steeper the slope the longer the steps. The run down is made with rather short steps. In both the run up and the run down the body should be nearly at right angles with the slope and the back should be straight.

At first the performer runs up and catches hold of the wall bar, then turns about, and bringing his body to the proper inclination, lets go the bar and runs down. It is convenient to have two benches set about two feet apart, and to send the boys up one and down the other; they can then follow each other closely and time is saved.

Later, the performer having reached the top of the bench may turn quickly on the balls of both feet without altering the angle of the body to the slope, and run down. It is advisable at first to practise the turn after running two or three steps up a gentle slope, and then on a steeper one.

When the boys have acquired sureness of foot, they may run up and down two benches hooked up on opposite sides of the beam with their ends touching. At first the beam should not be set above chest height, and the boys should be required to stop at the top of the first bench and step deliberately on to the other. Later, they may be allowed to take a flying run over both. Care must be taken to see that the benches do not shift their position.

(iii) *Exercises from Side Sitting Position.*

These exercises can be carried out with either the round or the flat edge of the beam uppermost, except No. 47, for which the flat edge is used.

45. (Sd.Sit.) Turn. to Sit. posn. and back again.

The beam is first set at hip height, and Sd. Sit. position is taken by grasping the beam, turning sideways, and resting one thigh upon it. The back is then straightened and the hands may be taken off the beam. *To sitting position—turn!* Grasp the beam with a hand on each side of the body, the fingers on the side of the legs, the thumbs on the other, and turn to the sitting position. *To side sitting, left (right)—turn!* Turn again to side sitting with one foot or toe on the ground. Practice from side sitting with either thigh on the beam. Fig. 101.

46. (Bal.Sup.) Turn. to Sd. Sit. posn. between the hands.

The Bal. Sup. position is taken as in Exercise 30. The beam should be low at first.

To side sitting between the hands, left (right)—turn! Turn the body in the named direction until the thigh which touches the beam

can be raised to rest upon it. Fig. 102. *To balance support—turn!* Take the weight of the body on the arms, slip the thigh off the beam and turn forward to the Bal. Sup. position.

47. (Sd.Sit.) Lg. swing. over beam to Asd. Sit. posn.

To astride sitting—change! Lean back a little until the supporting leg can be swung over to the other side of the beam, holding the arms free to assist in keeping the balance. *To side sitting on the left (right)—change!* Lean back and swing the right (left) leg over the beam to side sitting position. In the first few practices the hands may grasp the beam behind the body as the leg is swung over.

48. (Sd.Sit.) Lg. swing. over beam to Sd. Sit. on opposite side.

Side sitting on the other side of the beam—change!

As in the preceding exercise, but both legs are swung over the beam, one after the other.

49. (Bal.Sup.) Moving along beam by turn. to Sd. Sit. between hands.

Move to the left (right), turning to side sitting between the hands—go! The movements are as follows: (1) turn in the named direction to Sd. Sit. between the hands, (2) take the grasp for Bal. Sup. with both hands beyond the raised knee, (3) bring the weight of the body forward on to the arms, slip the thigh off the beam and take the Bal. Sup. position further along the beam.

50. (Bal.Sup.) Moving along beam by turning to Sd. Sit. outside hands.

Turning to left and right outside the hands should be practised on a low beam before it is used in moving along the beam. *Move to the left (right), turning to side sitting outside the hands—go!* The movements going to the left are as follows: (1) turn the body to the right and raise the left thigh as for taking Sd. Sit. between the hands, but instead of placing the thigh on the beam, push the body backward with the arms until the thigh can be slipped on to the beam beyond the left hand, (2) grasp the beam on each side of the body, take the weight on the arms and turn to Sd. Sit. facing in the opposite direction, (3) grasp the beam beyond the raised knee and take the Bal. Sup. position as in the preceding exercise, and so on.

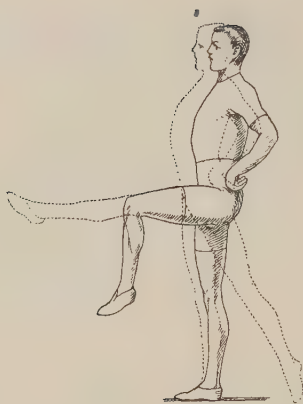


Fig. 93.



Fig. 94.

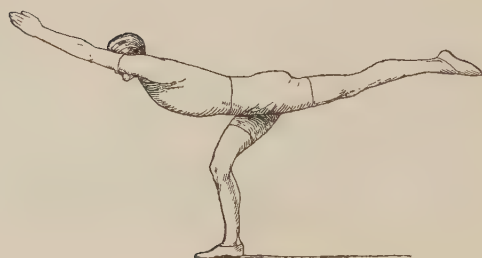


Fig. 95.



Fig. 96 (a).



Fig. 96 (b).

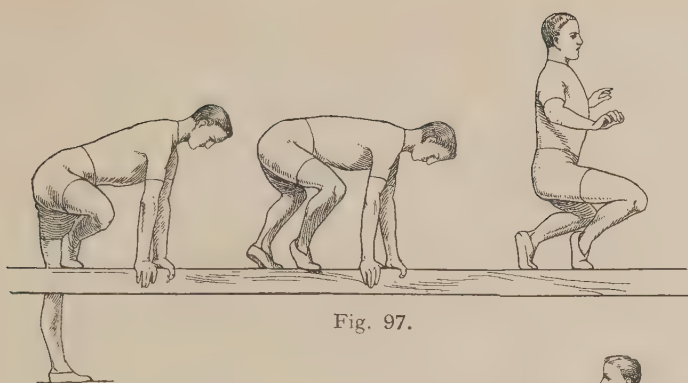


Fig. 97.



Fig. 99.

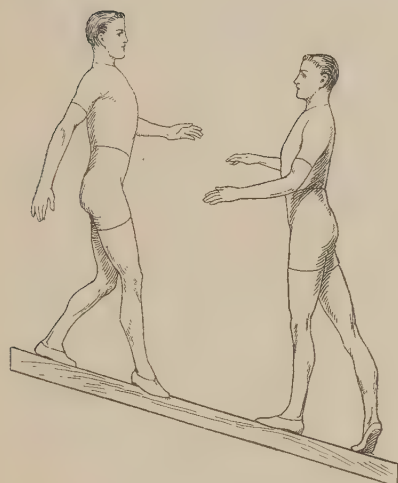


Fig. 98.

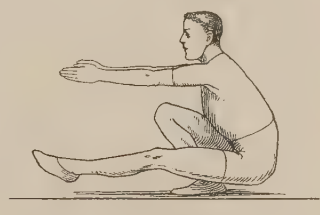


Fig. 100.

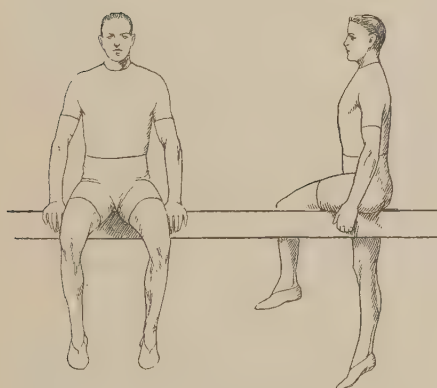


Fig. 101.

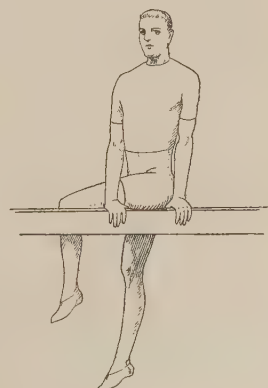


Fig. 102.

CHAPTER X.

ABDOMINAL EXERCISES.

These exercises, as their name implies, are concerned chiefly with the abdominal muscles, exercising and strengthening them so that they may provide a firm support for the abdominal organs and maintain a correct carriage of the lower part of the trunk, especially of the pelvis and lumbar spine. They have, further, the effect of stimulating the digestive process and maintaining the abdominal organs in a healthy condition.

Certain Abdominal Exercises, namely trunk bending downward in the St. position, are included amongst the Dorsal Exercises because they are always or nearly always combined with movements proper to the Dorsal Exercises and are complementary to them.

I. KNEE AND LEG RAISING IN BK.LY., ST.-BK.RST.-U.GR., AND HG.-BK.RST. POSITIONS.

The exercises of this sub-group help to preserve the normal length of the abdominal muscles, or to tighten them up if, through weakness or faulty postural habits, they have become unduly lengthened. They are therefore of particular value for restoring the normal angle of the pelvis and correcting excessive curvature of the lumbar spine. For the most part the exercises require the abdominal muscles to maintain a state of steady contraction in order to prevent the pelvis and lumbar spine from moving when pulled upon by the muscles that raise the legs. The legs, however, may be carried beyond the point of full flexion of the thigh joints, as in the exercise (Bk.Ly.-Kn.Ra.) Kn. rais. to chest, and the movement is then produced by an active shortening of the abdominal muscles.

As in these exercises the abdominal muscles have to fix the parts from which the leg-raising muscles exert their pull, so the abdominal muscles in their turn need the firm anchorage provided when the upper part of the trunk is fixed, either by its own weight or by the hands grasping an apparatus. If this final fixation is not provided, the abdominal muscles will depress the chest and render breathing difficult. In the lying position the fixation is obtained partly by the weight of the trunk and head, partly by pressing the hands on the floor or by placing the arms sideways, or above the head, so as to increase the leverage. Additional support may be obtained by grasping an apparatus. In the standing and hanging positions the fixation is ensured by the nature of these positions.

When the legs are raised, the tension of the abdominal muscles tends to restrict the breathing, and it is therefore desirable at first to raise the legs with the knees bent (shortened levers), and to repeat

the movements instead of attempting to hold the position with the legs raised. Greater demands can be made when the abdominal muscles are stronger and the breathing can be carried on without difficulty under more severe conditions. The possibility of free respiration should determine the degree of severity of the exercises chosen at any stage of the training. In this connexion, it should be remembered that the greatest strain on the abdominal muscles, and therefore the greatest restriction to the breathing, occurs when the legs are horizontal or nearly so. In the lying position, therefore, the first part of the movement is the most severe, and in the standing and hanging positions the last part.

In all these exercises, except such as "Thunder" and "Cycling," the ankles are stretched. In the standing position, the knee is raised until the thigh is horizontal, the leg until it is as nearly horizontal as is possible with the maintenance of a good carriage of the body. In the hanging position the knees or legs are raised until the thighs are horizontal or slightly inclined upwards. In knee raising from the lying position the knees are sharply bent; in the standing and hanging positions the lower leg hangs vertically until the knee is fully bent, i.e. the angle between the thigh and leg decreases as the knee is raised. In leg raising the legs are fully stretched. For the most part the movements are made at a moderate speed; the slower they are, the more difficult they become.

(i) *Knee and Leg Raising in Back Lying Position.*

1. **Lift the sack.**

Game form. This exercise, though not of the same form, has the same general effect as the exercises of this sub-group.

Partners stand back to back with feet astride and elbows interlocked. At the command *Lift!*, one boy inclines his trunk forward, keeping his back straight, and lifts the other, who brings his legs together, bends his knees and raises them until the thighs are vertical. At the command *Lower!*, the lifter returns to the erect position and the other places his feet astride on the ground. Later, the exercise can be done informally, the partners lifting each other alternately. With older boys, the boy lifted may keep his legs straight and raise them to an angle of 45° with the ground.

The boy lifting must be careful not to round his back or bend so far forward as to throw the other over his head. This will not occur if the lifter keeps his back and knees straight, and both grip tightly with the elbows.

2. (Bk.Ly.-Kn.Ra.) **Kn. rais. to chest.**

(*With knees up, on the back—down!*) *To the chest, knees—raise! Knees—lower! etc. (Stand—up!)* The S.P. is taken with the knees raised and together, and the feet resting on the ground close to the body. Raise the knees as close to the chest as possible, pressing the hands on the ground. Fig. 103.

3. (Bk.Ly.-Kn.Ra.) Lg. rais. over head to touch floor.

Feet over the head to the floor—go! Swing the knees up, straighten them and touch the floor with the toes beyond the head; then return to the S.P. Press hard on the floor with the hands.

4. (Bk.Ly.-Kn.Ra.-U.Gr.) Lg. rais. to fix feet asd. (Wall bars).

S.P. as in preceding exercise, but with the arms stretched above the head and the hands grasping the second or third lowest wall bar. *Fix the feet—up! Down!* Raise the legs and fix the feet under the bar grasped by the hands, with the knees a little bent and the feet outside the hands. Fig. 104.

5. (Bk.Ly.-Hi.Kn.Ra.) Lg. stretch. u. (palms of hands on floor).

(On the back—down! Knees—raise!) Leg stretching upward—one! two! etc. *(Knees—lower!)*. Raise the knees, fully bent, until the thighs are vertical. At “one” stretch the legs upward. At “two” bend the knees. Later, the thighs are raised not quite to the vertical.

6. (Bk.Ly.-Hi.Lg.Ra.-Fxd.-U.Gr.) Lg. stretch.

The S.P. is taken by fixing the feet as in Exercise 4. *Leg stretching—begin! Stop!* Free exercise. Efforts are made to stretch the knees, either alternately or together. Later, the feet may be fixed between the hands.

7. (Bk.Ly.-Kn.Ra.-Am.U.) Cycling.

The arms are stretched above the head, fists closed and pressed on the ground. *Cycling—begin! Stop!* The feet are raised and make rapid movements as in bicycling.

8. (Bk.Ly.-Kn.Ra.) Thunder.

Thunder—begin! Stop! The feet beat alternately on the ground as rapidly and with as much noise as possible.

9. (Bk.Ly.-Am.U.) 1 Lg. rais. to 45°, later 1 Lg. rais. to 90°.

Left leg half-way—raise! Lower! Later: *Alternate leg raising, begin with the left—one! two! three! four!* At “one” raise the left leg, at “two” lower it, at “three” raise the right leg, etc.

10. (Bk.Ly.-Nk.Rst.) Lg. rais. to 90° with Kn. bend and stretch.

Leg stretching upward—one! two!

At “one” the knees are raised and as the thighs approach the vertical the legs are stretched upward. At “two” the knees are first bent, and as the legs are lowered the knees are gradually straightened until the legs come to the ground fully extended.

11. (Bk.Ly.-Am.U.Clp.-Lg.Ra.) Lg. swing. d. with Tr. rais. to the sit. posn.

(On the back—down! Clasp the hands above the head! Stretch the legs upwards!) *Rocking—begin! Stop!* A free rocking movement. The hands are clasped above the head, the legs are stretched upward.

The trunk swings up as the legs swing down, and vice versa, the angle between them being maintained. The impulse for the swing is gained first by swinging the legs and pressing off from the ground with the hands, then pressing off with the feet and swinging the arms.

12. (Bk.Ly.—Am.S.Clen.) Kn. rais., Lg. stretch to 45° and lower.

Knee raising, leg stretching and lowering—one! two! three! At “one” the knees are raised till the thighs are vertical. At “two-three” the knees are stretched with the legs at an angle of 45° to the ground, and without pause the legs are lowered to the ground.

Later, the knees may be stretched to 45° and immediately bent again to the knee raise position several times before the legs are lowered to the ground.

13. (Bk.Ly.—Nk.Rst.) Lg. rais. to 90° (legs straight).

(Bk.Ly.—Am.U.) Lg. rais. to 45°; later, slightly.

Legs raising (half-way) (slightly)—one! two! These are hard exercises. Attention to the breathing is needed. The speed of the movements should be even and moderately slow. The feet should be placed down quietly.

(ii) *Knee and Leg Raising in St.—Bk.Rst.—U.Gr. and Hg.—Bk.Rst. Positions.*

14. (St.—Bk.Rst.—U.Gr.) Cycling. (Wall bars).

(Backs to the wall bars—go! Arms upward—grasp!) Cycling—begin! Stop! See Exercise 7. The knees should be raised as high as the strength will allow.

15. (Hg.—Bk.Rst.) Cycling. (Wall bars).

(To the top bar, face outwards—up!) See Exercise 14.

16. (St.—Bk.Rst.—U.Gr.) 1 Kn. rais. (Wall bars).

(Hg.—Bk.Rst.) 1 Kn. rais. (Wall bars). (Fig. 123).

Left knee—raise! Lower! Right knee—raise! Lower! Repeat by numbers—one! two! three! four! Raise the knee as high as possible. Keep the other knee straight. Fig. 105.

17. (St.—Bk.Rst.—U.Gr.) Kn. rais. high. (Later, rhyth.) (Wall bars).

(Hg.—Bk.Rst.) Kn. rais. high. (Wall bars).

Raise the knees to the chest—go! Again—go! etc.

Raise the knees quickly and try to touch them against the chest, then lower the feet to the ground or to the hanging position. Later: *Knee raising to the chest—begin! Stop!* Fig. 106.

18. (St.—Bk.Rst.—U.Gr.) 1 Kn. rais. and Lg. stretch. f. (Wall bars).

Knee raising and stretching forward, left—one! two! three! four! At “one” raise the left knee, at “two” stretch the leg forward, keeping it as high as possible and the other knee stretched, at “three” bend the left knee, at “four” place the left foot on the floor. Repeat with the right leg.

19. (St.-Bk.Rst.-U.Gr.) Kn. rais. and alt. Lg. stretch. f. (Wall bars).
(Hg.-Bk.Rst.-Kn.Ra.) Alt. Lg. stretch.

Knees—raise! Left knee—stretch! Change—one! two! etc. Right knee—bend! Knees—lower! At “one” bend the left knee and stretch the right, and vice versa at “two.”

20. (St.-Bk.Rst.-U.Gr.) Kn. rais. and Lg. stretch. f. (Wall bars).

Knee raising and leg stretching forward, by numbers—one! two! three! four! At “one” raise the knees, at “two” stretch the legs forward, at “three” bend the knees, at “four” lower the legs.

21. (Hg.-Bk.Rst.-Kn.Ra.) Lg. stretch.

*Knees—stretch! Bend! Repeat by numbers—one! two! The legs when stretched should not be below the horizontal. At first the command may be *Knees stretch and bend—go!*, when the bending of the knees follows their stretching without a pause. Later, the knees are stretched and bent several times before the knees are lowered.*

22. (Hg.-Bk.Rst.) Alt. Kn. rais. (quickly 1-2).

Quickly, left knee—raise! Change—one! two! etc. Right knee—lower! At “one” lower the left knee and raise the right, and vice versa at “two.”

23. (Hg.-Bk.Rst.-Kn.Ra.) Kn. part.

(Hg.-Bk.Rst.-Lg.Ra.) Lg. part.

Knee (Leg) parting—one! two! At “one” the knees or legs are separated as widely as possible; at “two” they are brought together again. The thighs are kept horizontal.

24. (Hg.-Bk.Rst.) Kn. rais. and Lg. swing. u.

Raise the knees and swing the feet over the head—up! Again—up! Free exercise. Swing the legs up, stretching the knees at the same time, until the feet are above the head, or touching (or with the soles under) the bar grasped by the hands. At first the exercise can be taken from the Hg.-Bk. Rst. posn. with a preliminary kick-off the bars. Fig. 107.

25. (Hg.-Bk.Rst.) Kn. rais., Lg. stretch f. and lower.

Knee raising, leg stretching and lowering, by numbers—one! two! three! At “one” raise the knees, at “two” stretch the legs forward, and at “three” lower them steadily.

26. (Hg.-Bk.Rst.) Lg. rais.

Legs—raise! Legs—lower! Knees and ankles well stretched. Legs raised until horizontal, or above. Fig. 108.

27. (Hg.-Bk.Rst.-Hi.Lg.Ra.-Fxd.) Lg. stretch. (Wall bars).

Free exercise. The legs are first swung up and the feet fixed under the bar grasped by the hands, as in Exercise 24. Then knee stretching is carried out as in Exercise 6.

28. (Hv.Hg.-Bk.Rst.) Kn. rais., etc.

Any of the preceding exercises in the Hg.-Bk.Rst. position can be carried out in the Hv.Hg.-Bk.Rst. position. They are then much more strenuous, and suitable only for the older boys. The hands should be as widely apart as possible and the elbows bent to a right angle. Fig. 109.

II. EXERCISES IN SIT.-KN. RA. AND BK. LY.-KN.RA. POSITIONS.

These are exercises of trunk bending downward and exercises in the trunk downward position. They have close affinities with the similar exercises in the Dorsal Group, where a description of this type of exercise is given. Exercises 37, 38, 39 and 40 also include a trunk lowering backward, but in this part of the movement the trunk is not required to be held straight as it is in the exercises of the next sub-group.

Since the trunk bending downward needs to be accompanied by a forcible expiration, the exercises as a rule should be free, so that each boy may take breath as and when he needs it. The importance of attending to the breathing should be impressed on the boys.

29. (Hz.Sit) Tr. bend. f. to grasp feet.

With knees straight, sit—down! Grasp the feet and pull! Keep the knees straight and pull the face down between them. Free exercise. Fig. 110.

30. (Hz.Sit.-Kn.Ra.-Ft.Rst.-Tr.F.-F.Gr.) Alt. Lg. stretch; later, Lg. stretch. (free). (Wall bars).

(With knees up and feet against the bars, sit—down! Grasp!) Alternate leg stretching—begin! Grasp the bar next above that against which the feet rest. Stretch one knee and bend the other at the same time. Free exercise. Later, both knees are stretched at the same time.

31. (Hz.Sit.-Kn.Ra.Op.-Ak.Gr.) Lg. stretch.

(With knees up and open, sit—down! Grasp the ankles!) Leg stretching—begin! Free exercise. Grasp the ankles with thumbs inside and fingers outside. Stretch both knees at the same time. Later, the exercise can be made more difficult by grasping the feet instead of the ankles.

32. (Hz.Sit. [-Ft.Rst.]) Tr. bend. d. to grasp feet or lowest wall bar.

With knees straight (and feet against the bars), sit—down! Grasp the feet (or lowest bar)—begin! Free exercise. Keep the knees straight.

33. (Hz.Sit.-Asd.) Tr. bend. d. to grasp feet.

As in the preceding exercise, but with the feet widely separated.

34. (Hz.Sit.—Tr.D.—Ft.Gr.) Hl. lift. with the hands.

With knees straight, sit—down! Grasp the feet! Heel lifting—begin! Free exercise. Keep the knees straight. Lift the heels alternately or both together.

35. (Hz.Sit.—1 Kn.S.—Ft.Gr.—Tr.D.) Tr. press. d.

The Hz. Sit. position is taken, then one foot is carried backward until the knee is pointing out sideways (hurdling position). Both feet are then grasped, the back foot by its heel or inner border. The trunk is then pressed down towards the extended leg, the knee of which must be kept straight. Fig. 111.

36. (Hz.Sit.—Asd.—Ak.Gr.—Tr.D.) Tr. press. d. (:).

This is a passive exercise. The performer takes the S.P. as in Exercise 30, and, relaxing his trunk muscles but keeping his knees well stretched, is given the exercise by his assistant. The assistant stands facing the performer with his feet outside the legs and his hands on the shoulder-blades of the latter. He then sets up a rhythmic swing of the performer's body, pressing it down lower and lower.

37. (Bk.Ly.—Kn.Ra.Op.—Fxd.—Hn.Hp.) Tr. swing. u. and bend. d. (Wall bars).

(With knees up and open and feet fixed, on the backs—down! Hands on hips!) Trunk swinging forward and backward—go! Again—go!, or Begin! Stop! The trunk is swung up and forcibly down between the knees, then laid back on the floor.

38. (Bk.Ly.—Kn.Ra.—Am.S.) Tr. swing. u. and bend. d. with Lg. stretch., to grasp feet.

(With knees up and arms sideways, on the back—down!) With leg stretching, grasp the feet—go! Again—go! Free exercise. Swing the trunk and arms upward and forward while straightening the knees, and grasp the feet; then bend the knees and allow the trunk and arms to sink back to the S.P. At first, the hands may be allowed to move along the ground.

39. (Bk.Ly.—Kn.Ra.—Am.U.Clp.) Tr. swing. u. and bend. d. with Lg. stretch.

The same as the preceding exercise, but with the hands clasped above the head, and the effort made to bring the hands as far beyond the feet as possible.

40. (Bk.Ly.—Lg.Ra.—Ft.Rst.—Am.U.Clp.) Tr. rais. and bend. d. to grasp bar. (Wall bars).

(With heels on the fourth (fifth) bar, on the back—down!) Grasp and pull—go! Again—go! The heels rest on a wall-bar with the legs at an angle of 45°. The trunk is swung upward and forward, the hands grasp a bar, and the trunk is pulled in towards the legs as far as possible. The knees are kept as straight as possible. Fig. 112.

III. EXERCISES IN FRONT SUPPORT POSITION.

In most of the exercises of this type the abdominal muscles maintain a static contraction in order to keep the trunk straight and to prevent it from sagging down between the points of support given by the hands and the feet. Some of these exercises provide a preparation for Hand-standing, Somersaults and Vaulting by cultivating the balance on and thrust with the arms, and familiarity with and confidence in an inverted position. In all these exercises the shoulders should be kept down, i.e. not hunched up towards the ears, the arms straight and the head held in a good position. In the Fr. Sup. position the hands should be placed on the ground or bench with the fingers pointing forward and inward. The arms should be at right angles to the body, not vertical, so that when the arms are bent the fingers are in line with the neck. As in other abdominal exercises, progress must be determined by the respiratory ability, and reminders about breathing need to be given during the exercises.

41. **Bear walk.**

Game form. Walk forward on hands and feet, keeping the knees as straight as possible.

42. **Crab walk.**

Game form. Move sideways on hands and feet, keeping the knees as straight as possible.

43. **Wheelbarrows.**

Game form. One boy is the wheelbarrow, the other is the driver. The wheelbarrow takes the Hz. Knl. position with his back to the driver, then raises his legs one at a time, and the driver clasps them round the knees in the crook of his elbows, pressing them firmly against his sides. The pair then move forward, the wheelbarrow with his head up and looking forward. The wheelbarrow is put down by lowering one leg at a time. Short wheelbarrow races can be arranged.

In "Empty wheelbarrows" the legs of the wheelbarrow are rested against the shoulders of the driver, who grasps the ankles and presses them against his shoulders. At first, one leg should be lifted into position at a time; later, when skill has been attained, both legs may be thrown up together. (See Exercise 52).

The following exercises, though not of the same form, have the same general effect as the exercises of this sub-group:—

44. **Pushing contest.**

Game form. Two opponents face each other between two lines drawn 10 to 15 feet apart. Each extends his arms sideways and places the palms of his hands against those of his opponent. At a signal each tries to push his opponent backwards over his line by pressing with the hands and chest. The arms must be kept straight and must not drop below the level of the shoulders.

45. Pushing wrestle.

Game form. As in the preceding exercise, but each boy places his right arm round his opponent's waist and his left arm over his opponent's right shoulder, and presses with his chest.

46. (St.-Crh.) Alt. Lg. stretch. b.

(*Crouch—down !*) *Left foot backward—place ! Feet changing—one ! two ! etc. (Right foot forward—place ! Stand—up !)* The left leg is fully extended backwards. The change is made with a little jump. The head must be kept up. Fig. 113.

47. (Bt.Fr.Sup.-Wd.Asd.) 1 Hn. touch knee, head, etc.

The exercise is taken informally. The S.P. is taken from the Crh. position by running the feet backward and outward a short distance and straightening the knees, so that the seat is rather higher than the shoulders ; or it may be taken from the Hz. Knl. position by straightening the knees and placing the feet wide astride with a jump. Fig. 114.

48 (Hi.Fr.Sup.) Ft. plac. f. with straight knees. (Beam, bench).

At first the beam is set a little below hip height. *Hands on the bench (or Grasp), front support—down !* Bend the knees, place the hands on the bench or grasp the beam, with the hands at shoulder width apart, then jump the legs back so that head, body and legs are in a straight line. *Jump forward with straight knees—one ! Backward—two ! etc.* The feet are brought close up to the apparatus. The head must be kept up. Fig. 115.

49. (Hi.Fr.Sup.) Alt. Ft. plac. f.

The S.P. is taken as in the preceding exercise. *Left foot forward—place ! Feet changing—one ! two ! etc. Right foot backward—place !* The left foot is brought forward, the left knee being bent and turned outward. The changing is done with a little jump as in Exercise 46.

50. (Hz.Knl.) Quick Lg. stretch.

On hands and knees—down ! Knees—stretch ! Knees—bend ! etc. Keep the head up.

51. (Bt.Fr.Sup.) Lg. kick. u.

Free informal exercise. The S.P. is taken as in Exercise 47, but with the feet together. Kick up both heels, one a little before the other, bending the knees. Press the head well back. With practice, the heels may be kicked up so high that the body remains for a moment poised on the hands. This exercise is a preparation for Hand standing.

52. (**Bt.Hi.Fr.Sup.**) **Lg. kick u., later with Lg. part. in the air. (Bench).**

As in preceding exercise, but with the hands resting on a bench, and both legs kicked up at the same time. Later, the legs may be parted and partially straightened as they go upwards, and brought together again for landing on the feet. Press the head well back.

53. (**St.-Crh.**) **Run. f. on hands to Fr. Sup. posn.**

A free exercise. Quick short steps forward and backward. Repeat several times. Fig. 116.

54. (**St.-Crh.**) **Lg. throw. b. to Fr. Sup. posn.**

With a jump, feet backward—place! With a jump, feet forward—place! Repeat by numbers—one! two!

55. In the **Fr. Sup.** position the following exercises are carried out :

Walk. round with feet.—Free exercise. Take short steps and keep the knees straight. Keep the head up and look forward. Do not bring the feet in towards the hands and so raise the seat.

Walk. s. with hands and feet.—Free exercise. Short quick steps. See Exercise 42.

Walk. round with hands.—Free exercise. Short, quick steps.

Ft. plac. asd. with jump.—*With a jump, feet astride—place!*

56. (**Hi.Fr.Sup.**) **Am. bend. (Beam, later bench). Fig. 117.**

(**Fr.Sup.**) **Am. bend.**

(**Hf.Fr.Sup.**) **Am. bend. (Bench, beam, wall bars). Fig. 118.**

(**Bt.Fr.Sup.-Asd.**) **Am. bend.**

In the first of these exercises the apparatus should be set first at waist height and later below this. In the third exercise the apparatus is placed so that the feet are level with the shoulders.

Arms—bend! Arms stretch! The arms are bent and the elbows turned outwards until the chest lightly touches the ground. The head, body and legs remain in one straight line, except in the **Bt.Fr.Sup.-Asd.** position, in which the angle between body and legs must not be altered.

57. (**Hi.Fr.Sup.-Asd.**) **1 Am. rais. f. and u. (Beam or bench).**

(**Fr.Sup.-Asd.**) **Placing one hand on hip.**

(**Fr.Sup.-Asd.**) **1 Am. rais. f. and u. Fig. 119.**

In these exercises the trunk must not be turned towards the side of the raised arm. (*Front support—down! With a jump, feet astride—place!*) *Left arm forward and upward—raise!, or Left hand on hip—place! Left arm—lower! etc. (With a jump, feet together—place!).*

58. (**Fr.Sup.-Asd.**) **Jump., and later clap. hands and feet together.**

Spring with both feet and hands at the same time. Later, clap the hands and the feet together while in the air.

59. (Hi.Fr.Sup.) 1 Lg. rais. (Beam or bench).

(Fr.Sup.) 1 Lg. rais. Fig. 120.

(Fr.Sup.) Am. bend. with Lg. rais.

(Fr.Sup.—1 Lg.Ra.) Am. bend.

In these exercises the leg is raised backward as high as possible without disturbing the position of the remainder of the body. The knee and ankle of the raised leg are well stretched.

Left leg backward—raise! Lower! etc.

Arms bend and left leg backward—raise! Arms stretch and leg—lower! (repeat, raising left and right legs alternately).

Front support—down! Left (Right) leg—raise! Arms—bend! etc.

60. Low Fr. Sup. position. (Wall bars).

Free form. Bt. Fr. Sup. is taken with the back towards the wall bars. Then one leg at a time is raised backward and the instep placed on a bar a little above the level of the shoulders. The body and legs are then stretched out to form a straight line.

The height of the feet may be gradually increased until the body is inclined at an angle of about 45° . When these steeper angles are reached it may be found possible to throw up both legs at the same time, as in Exercise 51 or Exercise 52. Fig. 121.

61. The following exercises are carried out in the Low Fr. Sup. position :—

(i) Head turning.

(ii) One Hn. lift. (Wall bars).

Mark time with the hands—begin! Stop!

(iii) Ft. moving up wall bars to Hn.St.—Fr.Rst. position. (Wall bars).

This is a free exercise. The feet are moved upward and the hands at the same time towards the bars, until the front of the body rests against the bars with the toes hooked over a bar or with the ankles stretched. *The head must be pressed well back.*

IV. TRUNK LOWERING BACKWARD IN SIT. AND KNL. SIT POSITIONS.

In all these exercises, at whatever angle the trunk is inclined backward, the carriage of the trunk and head must remain the same as in the St. position, except that in Exercise 68 the movement is accompanied by a head pressing backward. If the arms are raised, they must be held in the correct relative positions to the trunk.

The correct carriage of the trunk is maintained by the opposed and perfectly balanced efforts of the muscles of the abdomen and back, and these exercises are powerful factors in establishing this balance. When the trunk is inclined backward it is prevented from falling by the contraction of the abdominal muscles and the flexors of the thighs; the pull of the abdominal muscles tends to depress the ribs and to round the back, and this is resisted by the muscles

on the back of the trunk, chiefly by the spinal muscles. The farther back the trunk is inclined, or the more the leverage is increased by raising the arms, the greater is the weight thrown on the abdominal muscles, and if these are overtaxed, relief is sought, especially by the beginner, in rounding the back and bringing the head and arms forward. In this posture breathing becomes very difficult. With those accustomed to the performance of these exercises, the point where the abdominal muscles have reached the limit of their endurance is frequently marked by a trembling of the whole body, due to the fact that these muscles, unable any longer to exert a steady pull, have passed into a state of rapidly alternating relaxation and contraction. Exercises which induce either of these conditions are too strenuous. The exercises chosen for any class should permit the boys to maintain a good carriage of the trunk and to breathe freely throughout their performance. The degree of inclination of the trunk, the position of the arms, and the duration of the exercise, are factors which must therefore be considered. Careful attention must be given to the breathing throughout the exercise. It assists in the maintenance of a good carriage if the muscles of the trunk are put into an initial state of tension by stretching the trunk strongly upward before it is inclined backward.

In trunk lowering backward to 90° , the movement is continued until the thigh joints are fully extended; if the legs have an inclination to the ground, the trunk will also have this inclination and will not be parallel with the ground.

62. (Sit.-Fxd.-Hn.Hp.) Tr. lower. b. slightly; and later to 45° . (Bench).

At first the lowering and raising should be done in the rhythm of breathing, and the arms may assist in the movements, the hands grasping the front edge of the bench. The feet are fixed between the two lowest wall bars, and the knees are slightly bent; or the heels rest on the ground and the feet are fixed by another boy, who kneels on one knee and places his hands on the performer's insteps.

Slight trunk lowering and raising with breathing—one! two! At "one" lower the trunk, extend the knees, and breathe in; at "two" raise the trunk, bend the knees, and breathe out. The straightening of the knees helps to prevent any hollowing of the back, i.e. flexion of the lumbar spine.

Later: *Trunk half-way backward—lower! Trunk—raise!* At this stage, the difficulty of the exercise may be progressively increased by placing the arms in U.Bd., Hd.Rst., and Am.U. positions. Fig. 122.

63. (Sit.-Fxd.-Hn.Hp.) Tr. lower. b. to 90° . (Bench).

The S.P. is taken as in the preceding exercise. *Trunk backward—lower! Trunk—raise!* (Fig. 122).

The difficulty of the exercise may be progressively increased by placing the arms in U. Bd., Hd. Rst., and Am. U. positions.

64. (Hz.Sit.-Fxd.-Hn.Hp.) Tr. lower. b. to 90°.

(With knees straight and feet fixed, sit—down! Hands on hips—place!) Trunk backward—lower! Trunk—raise! The feet are fixed under the lowest wall bar or are held down by another boy. The trunk is lowered until the back rests on the ground. In raising the trunk, the chest should come up first. Fig. 123.

The difficulty of the exercise may be progressively increased by placing the arms in U.Bd. and Hd.Rst. positions.

65. (Hz.Sit.-Kn.Ra.Op.-Fxd.-U.Bd.) Tr. lower. b. to 45° or 90°.

(With knees up and open and feet fixed, sit—down! Arms—bend!) Trunk half-way backward (Trunk backward)—lower! The knees are bent to a right angle and turned outwards; the feet are fixed under the lowest wall bar with the heels together. The knees are not straightened as the trunk is lowered. Fig. 124.

The difficulty of these exercises may be progressively increased by placing the arms in the Hd. Rst. and Am.U. positions. After lowering the trunk backward to 90° with the arms stretched upward, the arms may be placed in the Hn.Hp. or the U.Bd. position before the trunk is raised again in order to decrease the severity of the exercise.

66. (Sit.-Fxd.-Hn.Hp.-Tr.B.) Am. chang. to U. Bd. (Bench).

After sitting on the bench, fixing the feet and placing the hands on the hips, as in Exercise 85, the S.P. is taken on the command: Trunk half-way backward—lower! The commands for the exercise are: Arms—bend! Hands on hips! Repeat—one! two!

67. (Sit.Fxd.-U.Bd.-Tr.B.) Am. stretch. s. or u. (Bench).

(Hz.Sit.-Kn.Ra.Op.-Fxd.-U.Bd.-Tr.B.) Am. stretch. s. or u.

(Hz.Sit.-Fxd.-U.Bd.-Tr.B.) Am. stretch. s. or u.

In these three exercises the starting positions are taken as in Exercises 32 and 33, but with the arms in the U. Bd. position and the trunk inclined at an angle of 45°. In these positions arm stretching sideways is carried out by numbers. Later, the arms may be stretched upward.

68. (Knl.Sit.) Tr. lower. b. with Am. rais. s. to rest Hd. and Hn. on floor. (:)

Sit on the heels—down! The boys in pairs sit on their heels facing each other. The supporter places his hands on the performer's knees and presses them down. The exercise is free and is carried out by lowering the trunk backward, at the same time pressing the head back and extending the arms sideways until the head and palms of the hands rest on the ground. Fig. 125.

V. TRUNK LOWERING BACKWARD IN ST.-FXD.F. POSITION.

69. (St.-Fxd.F.-Hn.Hp.) Tr. lower. b. (Wall bars).

(Facing and at arm's length from the wall bars—go! Left foot at knee height—fix! Hands on hips!) Stand with the shoulders square with the wall bars. Raise the left leg directly forward and fix the foot between the bars at knee height, turning the toes outward and crooking them round the upper bar. The right leg should be slightly inclined *towards* the bars, and it may be necessary to hop backward slightly with the right foot to gain this position.

Trunk backward—lower! Trunk—raise! Repeat by numbers—one! two! etc. Feet—change! Lower the trunk until it is in line with the raised leg, keeping the shoulders level and not allowing them to turn away from the raised leg. The knee of the standing leg must be kept firmly stretched. The movement takes place chiefly in the lumbar spine, because the fully extended hip joint of the standing leg prevents the hips from rotating. Change the feet and repeat the movements. Fig. 126.

The difficulty of the exercise may be progressively increased by placing the arms in the U.Bd., Nk.Rst., and Am.U. positions.

70. (St.-Fxd.F.-U.Bd.-Tr.B.) Am. stretch. s. (u.). (Wall bars).

The S.P. is taken as in the preceding exercise, but with the trunk lowered backward. Arm stretching sideways is then carried out and is repeated after changing feet.

71. (St.-Fxd.F.-Am.U.-Tr.B.) Am. swing. f. and u. (Wall bars).

The S.P. is taken with the arms stretched upward and the trunk inclined backward. The arms are swung forward until they are horizontal. The difficulty is to keep the balance. This is a strenuous exercise and the movements should not be repeated more than two or three times.

72. (St.-Fxd.F.-Hn.Hp.) Tr. lower. b. with 1 Kn. bend. (Wall bars).

With knee bending, trunk backward—lower! With knee stretching, trunk—raise! With the left foot fixed: lower the trunk backward and at the same time bend the right knee, turning it outwards, until the trunk and fixed leg are nearly horizontal and in one straight line. This exercise requires considerable powers of co-ordination and is suitable only for advanced pupils. Fig. 127.



Fig. 103.

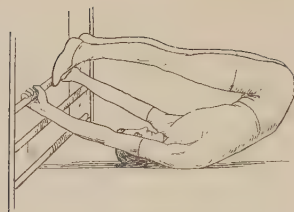


Fig. 104.

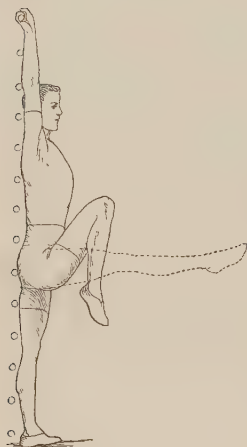


Fig. 105.



Fig. 106.



Fig. 107.



Fig. 110.

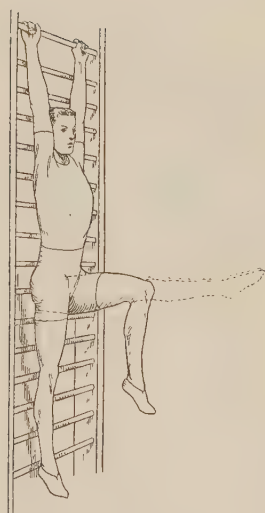


Fig. 108.



Fig. 109.



Fig. 111.

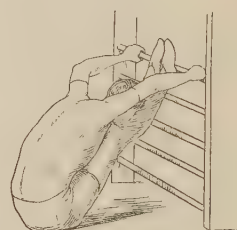


Fig. 112.



Fig. 113.

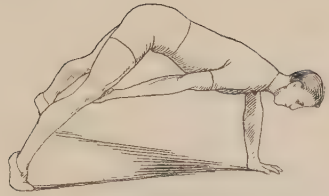


Fig. 114.

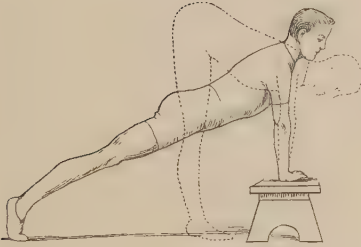


Fig. 115.

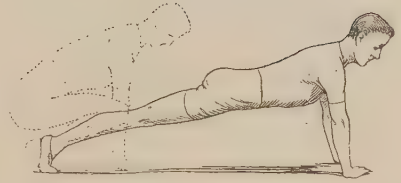


Fig. 116.



Fig. 117.

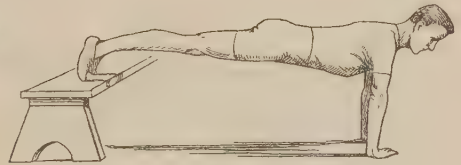


Fig. 118.

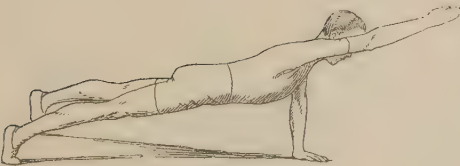


Fig. 119.



Fig. 120.



Fig. 121.

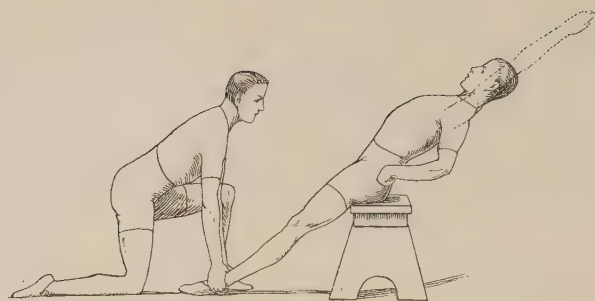


Fig. 122.



Fig. 123.



Fig. 124.

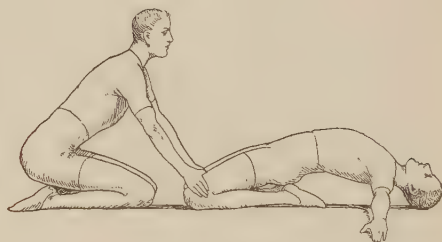


Fig. 125.

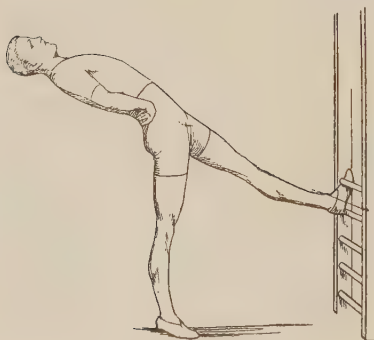


Fig. 126.



Fig. 127.

CHAPTER XI.

LATERAL TRUNK EXERCISES.

The Lateral Trunk Exercises employ chiefly the abdominal and the spinal muscles (principally the oblique muscles). They strengthen the body wall and are therefore closely allied to the Abdominal Exercises. They increase the mobility of the spine and strengthen the muscles which support it laterally, and therefore help to create a straight carriage and to prevent lateral deviations of the spine. They promote free movement of the lower ribs, and thus help to widen the chest and increase its flexibility. They have, further, a considerable effect in promoting the circulation of the blood through the abdominal organs and in stimulating the processes of digestion and secretion.

In order to secure a definite rotation or sideways flexion of the spine, indicated by a turn or a tilt of the shoulders in relation to the hips, the hips must be prevented from moving, or their movements must be definitely circumscribed. The starting positions chosen for these exercises are designed, as regards the position of the feet and legs, to secure this immobility or definite limitation of movement. Careful attention, therefore, should be given to holding these positions firmly, otherwise it will not be possible to control the effects of the exercises.

I. TRUNK TURNING.

In the exercises of this sub-group the trunk is turned to the left or right as far as possible : it is the last bit of the turn that is of most value. In all the standing positions the feet must not be allowed to move nor the knees to bend, but given these conditions the hips may rotate as far as movement in the ankle and hip joints will allow. Unless otherwise directed, the head and arms are carried round with the trunk without any separate movement of their own. The trunk should be well stretched upwards before the turn is begun, because this allows the ribs and dorsal spine to move freely. On the other hand, an over-extension of the back, as by a pressing back of the head, limits movement and must be avoided.

In the standing and some of the other starting positions, the muscles which rotate the thighs are called strongly into play and are straightened by these exercises.

The commands for Trunk turning are :—

Trunk to the left (right)—turn ! Trunk forward—turn !, or Trunk turning by numbers—one ! two ! three ! four ! At “one” the trunk is turned to the left, at “two” forward, at “three” to the right, and at “four” forward.

The commands for Trunk turning from side to side are :—

Trunk to the left—turn ! Trunk to the right—turn ! Trunk to the left—turn ! etc. Trunk forward—turn !, or Trunk turning from side to side by numbers—one ! two ! etc. Trunk forward—turn ! At “one” the trunk is turned to the left, at “two” forward and to the right, at “one” again forward and to the left, etc.

All the movements of the trunk are carried out at a moderate speed. If they are to be done quickly, the commands are : *Quick trunk turning by numbers—one ! etc., or Quick trunk turning from side to side by numbers—one ! etc.*

1. Grind Coffee.

Game form. The boys in pairs take ring-chain with the hands held low. To learn the movement, keep one pair of hands low, raise the other pair sideways and upward, walk forward under the raised arms and turn back to back. Then lower the raised arms and raise the other pair and walk backwards under them, turning face to face. After a little practice of this, the whole movement can be taken without a pause, and, later on, several consecutive movements sideways.

2. (St.—Asd.) Tr. and Hd. turn.

The arms hang freely, the trunk is turned as far as possible on the hips and the head on the trunk. Taken informally ; free movement can be encouraged by telling the boys to try to look as far round as they can. Fig. 128.

3. (St.—Asd.—Hn.Hp.) Quick Tr. turn. from s. to s.

Younger boys are not generally able to hold the body at the limit of the turns ; the rapid swing round induces a certain amount of “rebound,” which they have not the strength to resist. A certain degree of looseness in the movements must therefore be expected.

The movements may also be taken slowly. The difficulty of the exercise is increased by placing the arms in the Hd. Rst. position.

4. (St.—Asd.—Hn.Hp.) Tr. turn.

See the general remarks above. The difficulty of the exercise may be progressively increased by placing the arms in the Hd. Rst. Am. S., and Am. U. positions. When using these arm positions the tendency to bring the right arm forward of its proper position when turning to the left, and vice versa, must be resisted. Fig. 129.

5. (St.—Ft.F.—Hn.Hp.) Tr. turn.

The turning takes place to the side of the advanced foot only. The trunk is turned several times to one side, then the feet are changed and the trunk is turned an equal number of times to the other side.

The difficulty of the exercise may be progressively increased by placing the arms in Hd. Rst. and Am. U. positions. See the preceding exercise with regard to retaining the arm positions correctly.

6. (St.-Asd.-U.Bd.Clen.) Quick Tr. turn. with alt. Am. punch. f.

Punching forward with trunk turning—begin! Stop! The movements should be taught "by numbers." The exercise begins with the left arm; as this punches forward the trunk is turned to the right; then the right arm punches forward, the left arm is bent and the trunk is turned to the left. The head remains turned forward throughout the movement. The body must not be inclined forward. Fig. 130.

7. (St.-Asd.-Am.S.Clen.) Quick Tr. turn. from s. to s. with alt. Am. swing. across.

(With a jump, feet astride—place! With fists clenched, arms sideways—swing!) Quick trunk turning from side to side with alternate arm swinging across—begin! Stop! Taken informally, each boy trying to turn his body as far as possible. Turn the trunk quickly to the left and at the same time bend the right elbow to the F. Bd. position; then without pause turn the trunk to the right, flinging the right arm sideways and bending the left elbow. Continue from side to side, taking up an even rhythm. There is a kind of rebound from the swing to one side which helps the swing to the other side, and advantage is taken of this in all the quick turning exercises with arm movements. Fig. 131.

8. (Hz.Knl.) 1 Am. swing. s. with Tr. and Hd. turn. (1-4.)

(On hands and knees—down!) Alternate arm swinging sideways with trunk and head turning, to left and right by numbers—one! two! three! four! At "one," keeping the right hand on the ground and the arm straight, swing the left arm up sideways and at the same time turn the trunk and the head to the left. At "two" turn the trunk and head forward again and swing the left hand down to the ground. At "three" and "four" repeat with the right arm. The arm is swung as vigorously and as high as possible so as to assist in turning the trunk. Fig. 132. After the movements have been learnt, the counting may be done in a quick even rhythm.

9. (St.-Asd.-Am.D.-Tr.F.) Alt. Am. swing. s. with Tr. and Hd. turn.

(Feet astride—place! With arms hanging, trunk forward—bend!) Alternate arm swinging sideways with trunk and head turning, by numbers—one! two! etc. Stop! Free movements. At "one" vigorously swing the left arm up sideways as high as possible and at the same time turn the trunk and head to the left as far as possible; the right arm follows loosely. At "two" turn the trunk and head to the right, swing the left arm down and the right arm up sideways; and so on from side to side. At the command *Stop!*, turn the trunk forward and let the arms hang down. When first taught the movements should be slow, but as soon as they are understood they may be made quickly, in time with the even rhythm of the counting. Later, the movements are carried out freely at the command *Begin!* Fig. 133.

When the movements are carried out rhythmically the trunk and arms should be kept loose and turned with a smooth and rapid swing. There is no need to keep the back flat, but the trunk must not be allowed to move up and down.

10. (St.-Asd.-Ac.Bd.) Quick Tr. turn. with Am. fling.

Quick trunk turning with arm flinging, by numbers—one! two! three! four! At "one" the trunk is turned to the left and the arms are flung sideways; at "two" the trunk is turned forward and the arms are bent across; at "three" and "four" the movements are repeated, turning to the right.

11. (St.-Wd.Asd.-Ac.Bd.Clp.) Rhyth. quick Tr. turn. from s. to s. with El. swing.

(Feet wide astride—place! Arms across—bend! Clasp the hands!) *Quick Trunk turning from side to side with elbow swinging—begin! Stop!* First quickly turn the trunk to the left and at the same time swing the left elbow round to the left as far as possible, allowing the hands to move freely across the chest for this purpose; then without pause swing round to the right, and so on rhythmically. At the command *Stop!*, turn the trunk forward.

12. (St.-Wd.Asd.-F.Bd.) Quick Tr. turn. with 1 Am. swing. s.

(Feet wide astride—place! Arms forward—bend!) *Quick trunk turning with one arm swinging sideways, by numbers—one-two!, three-four!* Compare with exercise 6. As the counting indicates, the turn to the side and the rebound to the forward position follow each other without a pause. At "one" turn the trunk to the left and swing the left arm sideways, keeping the right elbow back; at "two" turn the trunk forward and bend the left elbow. Repeat to the right at "three-four."

13. (St.-Asd.-1 Hn.Hp.-1 Am.C.) Quick Tr. turn. with 1 Am. swing. m.

(Feet astride—place! Left hand on hip!) *Quick trunk turning with arm swinging midway—begin! Stop! Arms—change!* (repeat the movement on the other side). Turn the trunk to the left and bring the right arm across the body, then quickly swing the trunk round to the right and the arm to the midway position, and so on, without a pause between the movements. Taken informally at first; later, a definite rhythm may be established for all. Fig. 134.

14. (St.-Asd.-U.Bd.) Quick Tr. turn. with Am. stretch. u.

Quick trunk turning with arm stretching upward, by numbers—one! two! three! four! Stretch the arms upward as the trunk is turned to the side, and bend the arms as the trunk is turned forward. Keep the arms parallel to each other and back in line with the ears, and resist the tendency to bring the right arm forward when turning to the left, and vice versa. Also resist the tendency to throw the

weight on to the leg towards which the turn is made. The difficulty of the exercise may be increased by carrying out all the movements slowly, or by turning sideways slowly and forward quickly.

15. Arm exercises can be carried out with the trunk turned to one side, e.g. :—

(St.-Asd.-Hn.Hp.-Tr.Tn.) Am. chang. to Hd. Rst.

The object of this type of exercise is to give practice in holding the trunk turned to one side while arm movements are made. The arm movements must be repeated an equal number of times with the trunk turned to each side. The difficulty of the exercise, i.e. holding the turn fully and steadily, may be increased by increasing the difficulty of the arm movements, e.g. :—

(St.-Asd.-U.Bd.-Tr.Tn.) Am. stretch. s.

(St.-Ft.F.-Ac.Bd.-Tr.Tn.) Am. fling.

II. TRUNK BENDING SIDEWAYS.

In these exercises the trunk is bent directly sideways and as far as possible, the movement taking place in the shoulder-plane when the shoulders are held square to the front. The head is carried over without movement relative to the trunk. The spine in the region of the loins can be bent sideways more freely than the part to which the ribs are attached, and this gives rise to the common fault of limiting the bending chiefly to the loins. It is important that the upper as well as the lower part of the spine should be fully bent. The bending of the upper part is facilitated by stretching the body well upwards before beginning the movement. These exercises secure lateral flexibility of the spine in equal measure in both directions; they also strengthen and develop the muscles which hold the spine erect, and by developing the muscles on both sides equally assist in preventing the occurrence of lateral curvature. The alternate expansion and contraction of the opposite sides of the chest promotes the flexibility of the chest as a whole and so improves the respiratory power; it also stimulates the circulation in the large vessels.

When the trunk is bent to one side in the standing position the hips must be moved in the opposite direction in order to preserve the balance. This movement has the effect of tilting the hips towards the side of the bend. The farther the hips are moved the more they are tilted and the more the spine is inclined instead of bent sideways. When, therefore, the object is to secure the maximum flexion of the spine it is important not to move the hips more than is necessary to preserve the balance. This is ensured by retaining the position of the feet and keeping the knees well stretched. When correctly performed, the exercise employs chiefly the muscles which bend the trunk sideways, i.e. those situated on the side of the bend. These, with some assistance from the weight of the shoulders and head, have to contract strongly in order to

stretch the muscles and soft parts of the other side of the body, which by their elasticity resist the bending, especially towards the limit of its range. The muscles on the opposite side bring the body back to the erect position.

Any bending of the knee on the side towards which the trunk is bent, or any lifting of the opposite heel, allows the hips to take a considerable tilt. The muscles of the trunk on the side opposite to the bend have then to contract in order to prevent the body from falling over sideways, and this makes it impossible to secure a full flexion of the spine. It may, however, be the intention to exercise the muscles in this way, and in some of the exercises a large tilt of the hips is provided for, either in the starting position or in the movements.

In some of the less formal exercises the bend is not made directly to one side, and a certain amount of trunk rotation occurs, e.g. in **(St.-Asd.) Tr. bend. d. to grasp one ankle.**

The commands for these exercises are : *Trunk to the left (right) —bend ! Trunk upward—stretch !*, or *Trunk bending sideways, by numbers—one ! two ! three ! four !* At “one” the trunk is bent to the left, at “two” it is stretched upward, at “three” it is bent to the right, and at “four” stretched upward.

When the trunk is to be bent from side to side, i.e. when it is to be carried directly over from one side to the other without a pause in the erect position, the commands are :—

Trunk bending from side to side, by numbers—one ! two ! etc. Trunk upward—stretch ! At “one” the trunk is bent to the left, at “two” to the right, at “one” to the left, and so on. Or, if the movement is to be done rhythmically the executive word “begin” is used ; and at the word “Stop !” the body returns to the erect position. The movements are carried out at a moderate speed, unless otherwise directed ; if they are to be quick, the commands are : *Quickly, trunk to the left—bend !*, or *Quick trunk bending sideways, by numbers—*, or *Quick trunk bending from side to side—*.

The exercises of this sub-group are arranged below in three divisions : (i) Game forms ; (ii) those carried out from the St.-Asd., St., St.-Ft.Cl. and St.-Ft.F. positions ; (iii) those carried out from the Sd.St.-Ft.Rst. and Sd.St.-Fxd. positions.

(i) Games Forms.

16. Tug-of-war with one hand.

The boys, in pairs, stand side by side facing in opposite directions, and grasp the inner hands or link elbows. The grasp is best taken on the wrist or with crooked fingers (“butcher’s hook”). At the command *Pull !*, each tries to pull the other to his own side of the gymnasium or to some named point.

The contest can be given a more precise form as follows :—The boys stand between two lines drawn 3 or 4 yards apart with their

feet wide astride and their inner feet touching each other along the outer borders. Each then grasps the other's wrist, leans outward and bends the outer knee, then turns his head and eyes away from his opponent and raises his free arm in the direction of the pull. At the signal each tries to pull his opponent over his own line.

17. **Tug-of-war in ranks.**

Two ranks of equal numbers fall in facing each other with an interval between the boys in each rank of a full arm's length. The ranks take hands in zig-zag chain, and at the signal pull backwards until a boy in one of the ranks has succeeded in passing a given point, e.g. a line drawn on the ground, or in touching a wall.

18. **Rabbit hop sideways.**

Take the crouch position with the hands about 24 inches in front of the toes. The hands are then moved a short distance sideways and the feet are brought opposite to them with a little jump, and so on, moving sideways. The movements follow each other quickly.

19. **Kick the hand sideways.**

Hold one arm out sideways, say to the right, and level with the shoulder. Try to kick the hand with the right foot. Repeat several times on the command *Go!* Then repeat with the other arm raised. Keep the arm back, i.e. as far as possible kick sideways and not forward.

20. **Wheelbarrow that will not go.**

The boys in pairs. The wheelbarrow takes the Fr.Sup.-Asd. position; the driver stands between the legs of the wheelbarrow, picks them up and holds them close to the knees in the crook of his elbows. On the command *Go!* the driver attempts to drive the wheelbarrow straight forward over a distant line; the wheelbarrow, by pushing backwards with his hands and by sudden turns to right or left, tries to prevent this. There should be plenty of space between each pair of boys, and the contest should not be of long duration.

(ii) *Trunk Bending Sideways in St.-Asd., St., St.-Ft.Cl. and St.-Ft.F. Positions.*

21. **(St.-Wd.Asd.) Tr. bend. d. to grasp 1 ankle.**

Grasp the left ankle—down! Up! Right ankle—down! Up! At the word "down," bend down and grasp the named ankle with both hands, bringing the head as close to the knee as possible, and keeping both knees straight. At the word "up" straighten the body up again. The movements are made at a fair speed. Fig. 135.

Later, after the ankle is grasped, rhythmic trunk pressing downward can be carried out. *Trunk pressing downward—begin! Stop!* The movement consists in a rhythmic succession of strong contractions of the abdominal muscles in the endeavour to press down the head

and trunk closer to the thigh, each effort being followed by a slight relaxation, so that a rhythmic swaying of the body is set up. The arms assist with rhythmic pulls on the ankle.

22. (St.-Wd.Asd.) Quick Tr. bend. d. to touch opp. foot.

Right hand to the left toe—down! Up! Left hand to right toe—down! Up! At the word “down” bend forward quickly and touch the named toe with the opposite hand, raising the other arm backward and keeping both knees straight. At the word “up” straighten the body up again. Fig. 136.

23. (St.-Asd.-1 Hd.Rst.) Tr. bend. s. to touch knee.

(With a jump, feet astride—place! Left hand, head—rest!) Touch the left knee with the elbow—down! Up! etc. Arms—change! Repeat to the other side. At the word “down” bend the trunk to the left, bend the left knee and touch it with the left elbow. Keep the shoulders square to the front. At the word “up,” straighten the body up again. Later, the feet can be placed wide astride. Fig. 137.

24. (St.-Asd.-Hn.Hp.) Tr. bend. s.

See the general remarks on this sub-group of exercises. If the class is turned to face one wall of the gymnasium or playground and told to keep the shoulders square with this wall, it helps the boys to keep the movements of their shoulders in one plane. Fig. 138.

The exercise may be made progressively more difficult by changing the starting positions of the legs and arms: those of the legs from the Asd. to the St., Ft.Cl. and Ft.F. positions, which give less security of balance; and those of the arms from the Hn.Hp. to the Hd.Rst., Am.S., Ac.Bd. and Am.U. positions, which increase the difficulty of keeping the balance and, by bringing the weight higher, throw a greater strain on the trunk muscles, especially on those on the side opposite to the bend.

The first of these exercises to be done quickly, viz. **(St.-Asd.-Am.S.) Quick Tr. bend. s.**, is taken in free form, i.e. without much attention being paid to the correctness of form; it is rather the speed and the definite check at the end of each movement that should be looked to. Later, care must be taken that there is no turning of the trunk, and that the arms are kept up in line with the shoulders.

In **(St.-Ft.Cl.-1 Hd.Rst.) Tr. bend. s.** the bending is done only to the side opposite to the raised arm, the other hand sliding up and down the side of the leg.

When the Ft. F. position is employed, the trunk bending is done to the side of the advanced foot only. The movement is repeated an equal number of times with each foot forward.

When the Am. U. position is employed, care must be taken that the arms retain their position relative to the trunk; the tendency to drop the arm on the side to which the bend is made must be resisted, and also the tendency to turn the shoulders.

25. (St.-Asd.) Rhyth. quick Tr. bend. from s. to s.

See the general remarks on this sub-group of exercises. A quick rhythmic movement from side to side, bending as far as possible each way. The hands slide up and down the sides of the legs, and this helps to guide the bending directly sideways.

The difficulty of the exercise can be progressively increased by changing the position of the feet from Asd. to St., and by raising the arms to the Am.S., Hd.Rst. or Ac.Bd. position. The exercise may also be taken by numbers.

26. (St.-Asd.) Tr. bend. s. to touch floor, with opp. Hl. rais.

Touch the floor to the left, with right heel raising—down! Up! To the right—down! Up! At the word “down” bend the trunk to the left, at the same time bending the left knee and raising the right heel, and touch the floor with the finger tips outside the foot. The free arm is raised and carried backwards in order to counteract the tendency to lean forward. At the word “up” bring the body to the erect position with the arms by the sides, stretch the knee, and lower the opposite heel. Fig. 139.

Later, the palm of the hand instead of the finger tips can be placed on the floor. This should be in free form, each boy taking his own time. The movements should be slow at first, but their speed may be increased later.

The exercise may also be done without raising the opposite heel.

27. (St.-Asd.-Hn.Hp.) Tr. bend. s. with opp. Hl. rais.

This is the same as Exercise 24, except that as the trunk is bent to one side the opposite heel is raised, and as the trunk is raised the heel is lowered. *Trunk bending sideways with opposite heel raising, by numbers—one! two! three! four!*

The difficulty of the exercise is progressively increased by changing the position of the arms to Hd.Rst. and Am.S.

The exercise may also be carried out by bending from side to side, as in Exercise 25, either by numbers or rhythmically. *Trunk bending from side to side with opposite heel raising—one! (or begin!).*

28. (St.-Asd.-1 Hn.Hp.) Tr. bend. s. and rhyth. press.

(Feet astride—place! Right hand on hip). Trunk bending and pressing to the left—begin! Stop! Hands—change! Bending and pressing to the right—begin! Stop! At the word “begin” the trunk is bent to the left and a rhythmic succession of strong efforts are made to bend it down still further, each effort being followed by a slight relaxation so that a rhythmic swaying of the trunk is set up, the free arm reaching down the leg as low as possible at each effort. At the word “stop” the trunk is raised to the erect position.

The exercise may be made progressively more difficult by placing the arm on the side opposite to the bend in Nk.Rst., Am.U.Clen. and Hd.Rst. positions. In the Am.U.Clen. position the trunk

pressing sideways is assisted by making short and vigorous punches with the raised fist over the top of the head in the direction of the pressing.

29. (St.-Asd.-Clen.) Rhyth. quick Tr. bend. from s. to s. with alt. Am. punch. over head and behind back.

Trunk bending from side to side, punching over the head and behind the back—begin! Stop! The trunk bending is done as in Exercise 25. As the trunk is bent to the left the right arm punches over the top of the head as in the preceding exercise, while the left arm punches behind the back; as the trunk is bent to the right the position of the arms is reversed. Fig. 140.

30. (St.-Wd.Asd.-Hn.Hp.) Rhyth. Tr. bend. s. with opp. Kn. bend.

Rhythmic trunk bending to the left with right knee bending—begin! Stop! Bending to the right—begin! Stop! Bend the trunk to the left and at the same time bend the right knee and carry the hips over to the right as far as possible; then stretch the trunk upward while straightening the right knee, and so on. At the word "stop" return to the erect position. Fig. 141.

The exercise can be made progressively more difficult by placing the arms in the Hd.Rst. position, and in 1 Hn.Hp.-1 Am.U.Clen. (see Exercise 28).

(iii) Trunk Bending Sideways in Sd. St.-Ft.Rst. and Sd.St.-Fxd. Positions.

To make ready for these exercises:—At the command: *With left (right) side towards the bars (bench or beam), one pace clear—ready!*, all run to the apparatus and stand with the named side turned towards it and rather more than an arm's length away.

To take the Sd.St.-Fxd. position (a) on the wall bars, at the command: *Left (right) foot in the bars—fix!*, raise the named leg sideways, place the foot between the bars at knee-height with the toes turned upward so that they hold fast against the upper bar; (b) on the bench or beam, at the command: *Left (right) foot on the bench (beam)—place!*, raise the leg sideways and place the sole of the foot flat on the bench or diagonally across the beam; another boy on the opposite side of the bench or beam then grasps the raised leg round the ankle with both hands, and holds the foot down on the apparatus. Whether the position is taken on the wall bars or on the bench or beam, the leg must be raised directly sideways and not be brought forward at all, so that when fixed it projects at right angles from the apparatus. The standing leg should be vertical and the shoulders vertically above the hips and not inclined outwards. At the command: *Feet—change!* lower the raised leg, turn about, and fix the other foot.

The Sd. St.-Ft.Rst. position is the same as the Sd.St.-Fxd. position on bench or beam, except that the foot is not held by another boy.

31. The exercise 'Tr. bend. d. to grasp raised ankle' is carried out in the Sd.St.-Ft.Rst. and Sd.St.-Fxd. positions, as described in Exercise 21.

32. Trunk bending sideways, either away from the apparatus, or to both sides, or from side to side, or with rhythmic pressing, is carried out in the same way and with the same commands as in the corresponding exercises in free-standing positions (see Section ii). These exercises are made progressively more difficult by placing the arms in higher positions. Fig. 142.

33. Arm movements can be carried out with the trunk bent sideways away from the apparatus, e.g. in (Sd. St.-Fxd.-Ac.Bd.-Tr.S.) **Am. fling.**, the left foot is fixed, the arms are bent across and the trunk bent to the right, and then arm flinging is carried out by numbers; similarly, in (Sd.St.-Fxd.-U.Bd.-Tr.S.) **Am. stretch. u.** In the latter exercise the lower arm must not be allowed to drop towards the ground.

III. TRUNK LOWERING SIDEWAYS.

In this type of exercise the movement takes place chiefly in the hip joint of the standing leg, the hips turning round this point and carrying the trunk with them, the trunk being kept straight or only very slightly bent sideways. The outer leg moves with the trunk and is kept in line with it. The effect is to exercise the muscles on the upper side of the trunk, which have to prevent the trunk from bending sideways. The movement is started by a slight contraction of the opposite trunk muscles which tilts the body over, then the muscles on the upper side take hold, and the lowering and raising is done by the adductor muscles of the standing leg, which are thereby strengthened.

In the Th.Rst. position the beam is placed with its upper edge just below the level of the great trochanter.

34. (St.) Quick Tr. lower. s. with Lg. rais.

Quick trunk lowering sideways with leg raising, to the left—go! To the right—go! etc. The lowering and raising are done without a pause between them. The arms are at first held loosely and are used as needed to keep the balance; later they may be placed in the Hn.Hp. position. The exercise can be made more difficult (i) by swinging the arms sideways as the trunk is lowered, and swinging them to the sides as the trunk is raised Fig. 143; (ii) by making a distinct though brief pause after lowering the trunk, the pause being controlled by the commands "down" and "up."

35. (Sd.St.-Th.Rst.-Hn.Hp.) Tr. lower. s. with Lg. rais. (Beam).

Left (right) side against the beam—ready! Hands on hips! Stand sideways to the beam with the outside of the thigh pressed against it. There must be no leaning against the beam; the legs must be vertical, or the feet may even be placed a little more towards the

beam. *With leg raising, trunk to the left (right)—lower! Trunk—raise! etc.* The exercise is repeated an equal number of times with each side to the beam. Fig. 144.

The exercise may be made progressively more difficult by placing the arm that will be uppermost in the movement in the Am. U. position, or both arms in the Hd. Rst. position or in the Am. U. position.

36. (Sd.St.—Am.M.) Tr. lower. s. with Lg. rais., to grasp wall bars.

(With the left side towards the bars, one long pace clear—ready! Arms midway—stretch!) *With leg raising, trunk to the left—lower! Grasp!* Lower the trunk and grasp the bars with the hands equidistant from the head, and with the upper hand vertically above the lower. The common fault is to turn the body slightly towards the bars and to grasp with the upper hand in advance of the lower. Push with the lower arm and pull with the upper arm when the grasp has been taken. (This gives the starting position for the next exercise.) *Trunk—raise!* Push with both arms, release the grasp, and return to the starting position. Fig. 145.

37. Sideways holding.

After taking the starting position as given by the preceding exercise, swing the raised leg down in front of the standing leg, bending the lower arm in doing so, then immediately swing it up again, bringing the other leg up with it, and at the same time forcibly straighten the lower arm and pull with the upper arm (bending it if possible) so as to lift the body and turn the shoulders into a vertical position. Hold the body and legs for a second or two extended horizontally from the bars and at right angles to them, then drop the lower leg, return to the St. position, turn about, and repeat the exercise on the other side. Fig. 146.

The following preliminary exercises can be used :—

(a) After grasping the bars, swing the raised leg vigorously down in front of the other and up again, and as it reaches the top of its swing hop off the standing foot and pull and push with the arms so as to raise the body; drop back on to the lower foot and repeat.

(b) As in (a), but swing both legs up together, and as soon as they are horizontal, drop the lower leg and land on the foot, keeping the other leg up.

(c) With the raised leg supported in a horizontal position by an assistant, swing up the standing leg to it, pulling and pushing with the arms at the same time, and then let the lower leg down again either quickly or slowly.

(d) Stand close to the bars and grasp them as for side-holding. With a spring, throw the front of the body upward across the bars, getting the legs as high as possible, and then let the body and legs fall outwards as slowly as possible into or through the side-holding position.

IV. SIDE SUPPORT.

In the side support position the body with one side turned towards the ground rests on one arm at a right angle to itself and on the outside of one foot, the free leg being placed on the top of the other; the head, body and legs are held in a straight line, as in the standing position. The free arm is extended along the side of the body. In this position, the body tends to sag down between the supporting arm and foot, with a bend in the loins and a drop of the hips. To prevent this, all the muscles on the lower side of the body must be contracted, the adductors of the supporting arm, the trunk muscles to hold the loins straight, the adductors of the lower leg and to some extent the adductors of the upper leg to hold the hips up. The work done by these muscles in maintaining the position correctly gives the value to the exercise. In the earlier exercises the holding muscles may be assisted by raising the free arm over the head and grasping a wall bar or beam, and the strain on the muscles may be diminished by placing the supporting hand on a bench or beam (Hl Sd Sup.), and so bringing the body more upright. The amount of work which the holding muscles have to do may be progressively increased by introducing movements of the free arm and leg, which tend to disturb the position and to prolong the period during which it is held.

The Sd Sup. and Hl Sd Sup. positions are taken respectively from the Fr Sup. and Hl Fr Sup. positions (see p. 157) by turning the body over to one side and placing the upper leg on the lower. The positions are taken on the commands: *Front support—down! On the left hand—turn! Forward—turn! On the right hand—turn! etc.* Later, the change from one side to the other may be made at the command: *Turn—over!* (or, *Turn over, by numbers—one! two!*).

As a preliminary exercise, the Sd Sup. position may be taken with both feet on the ground from the Hl Sd And. position. One hand is placed on the ground about a foot behind the back, then the body is quickly turned and lifted into the Sd Sup. position, the feet being turned over on their sides at the same time. The sitting position is then returned to.

38 Hl.Sd.Sup.) Am. rais. and grasp. Bench and wall bars.

The Benches are placed against the wall bars. After turning on one side, the free arm is raised above the head at the command: *Grasp!* and the hand grasps the highest bar it can reach. With the upper arm pulling and the lower arm pushing, the body can be stretched well away from the bars. *Arm—down! Turn over, by numbers—one! two! Grasp! etc.*

In the position, viz. Hl Sd Sup. U.Gr., leg raising can be carried out, at the commands: *Leg—raise! Leg—lower!* The upper leg is raised as high as possible and at the same time the hips are raised so that both legs are equidistant from the centre line of the body.

The movement is assisted by pulling strongly with the upper arm. Then the upper leg is lowered and the S.P. resumed. Fig. 147.

Later, the Hi.Sd.Sup. position can be taken with the free arm in the U.Str. position but without the hand grasping an apparatus. *On the left hand, with the right arm above the head—turn!* The free arm must be kept well stretched. Leg raising can be carried out in this position.

The Sd. Sup. position can also be taken with U.Gr. Leg raising is carried out in this position, and also with the free hand on the hip, or the free arm in the Am.U. position.

39. (Fr.St.—Crh.—1 F.Gr.) Taking Sd. Sup. position. (Wall bars).

Crouch—down! With the right hand—grasp! Legs—out! Stand facing the wall bars, one pace clear; crouch down, raise the right arm above the head, turning the shoulders to the right, and grasp the highest bar that can be reached. Then throw the legs and body outwards from the bars into the Sd. Sup. position. *Legs—in!* With a little spring and a pull with the arm, return to the crouch position, but retain the grasp. *Hands—change!* Change the position of the hands and repeat on the other side.

40. (St.—Crh.) Taking Sd. Sup. position.

The position is taken from the Fr. Sup. position as described in the general remarks above. As a preliminary practice, it may be taken from the Hz.Sit.—Asd. position.

The Sd. Sup. position can also be taken with the free hand on the hips or the arm raised to the Am.U. position. In these positions, leg raising can be carried out.

After the Sd.Sup. position has been taken, the free arm can be brought to the U.Bd. position, and quick arm stretching upward carried out by numbers. The exercise can be combined with leg raising. *Right (left) arm upward—bend! Slow arm stretching upward with leg raising, by numbers—one! two!* The leg is raised as the arm is stretched, and lowered as the arm is bent. (See Exercise 38.)

The arm stretching can also be done with the leg kept raised. *Right arm upward—bend! Leg—raise! Arm stretching—* Fig. 148.

41. (Sd.Sup.—Hn.Hp.) Hp. rais.

Hips—raise! Lower! The hips are raised as high as possible and are then lowered until the body and legs are again in a straight line.

V. EXERCISES IN THE LUNGE OUTWARD POSITION.

See Leg Exercises, Sub-group V, for the methods of teaching the exercise of lunging outward. The maintained inclination of the trunk and the activity of the trunk muscles necessary for holding the position correctly, justify the inclusion of these exercises among the Lateral rather than among the Leg Exercises, though they have the characteristic effects of both groups.

42. Warlike Lunge outward.

See Leg Exercise No. 3.

43. (St.-Ln.O.-U.Bd.) Alt. Am. stretch. u.

(St.-Ln.O.-1 Am.U.-1 Am.B.) Am. chang. with stretch. or swing.

The lunge outward is made, then the starting position of the arms is taken, and the arm exercise carried out. See Arm Exercise 22.

44. (St.-Ft.Fl.Op.-U.Bd.) Lung. o. with alt. Am. stretch. u. and b.

Feet to a right angle ! Outward lunge with left arm stretching upward and right arm backward, left foot—place ! With arm bending, recover—place ! Right foot—place ! etc. In lunging to the right the movements of the arms are reversed. Lunging to one side and recovering can be repeated several times before lunging to the other side. Repeat to the left, lunging and recovering, by numbers—one ! two ! etc. To the right—one ! two ! etc. Fig. 149.

A change can be made after each lunge, at the commands : *Changing feet and arms, by numbers—one ! two ! At “one” recover, at “two” lunge with the other foot.*

Instead of recovering by bringing the advanced foot back to its original position, it can be done by bringing the rear foot up to the other ; there is then a continuous advance in a zig-zag line. *Advancing with outward lunge and alternate arm stretching—begin ! Stop !*

45. (St.-Ft.Fl.Op.) Lung. o. and touch floor.

Feet to a right angle ! Lunging outward to touch the floor with both hands, left foot—place ! As the foot comes to the ground, bend forward and touch the floor on each side of it with the fingers or knuckles, and recover immediately.

46. (St.-Ln.O.-Hn.Hp.) Tr. turn.

After lunging to the left : *Trunk to the left (or right)—turn ! Forward—turn !* Turn the trunk in the named direction without altering the position of legs or hips ; take care to keep the bent knee still. If the turn is towards the bent leg, the shoulders are turned until they are at right angles with its thigh, Fig. 150 ; if towards the straight leg, until the shoulders and legs are in the same vertical plane. Fig. 151. In either case the trunk must be kept in line with the straight leg.

47. (St.-Ln.O.-U.Bd.-Tr.Tn.) Am. stretch. s. or u.

After the S.P. has been taken by lunging and trunk turning, as in the preceding exercise, arm stretching sideways or upward is carried out. Arm stretching upward can be done with the trunk turned in either direction, but arm stretching sideways should be taken with the trunk turned towards the bent knee only. Fig. 152.



Fig. 128.



Fig. 129.



Fig. 130.



Fig. 131.



Fig. 132.



Fig. 133.



Fig. 134.



Fig. 135.



Fig. 136.



Fig. 137.

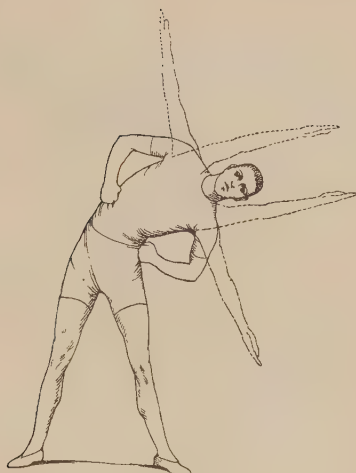


Fig. 138.



Fig. 139.



Fig. 140.



Fig. 141.



Fig. 142.

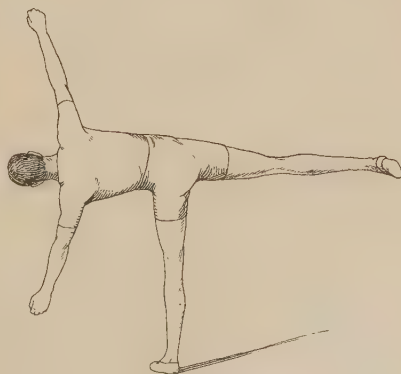


Fig. 143.

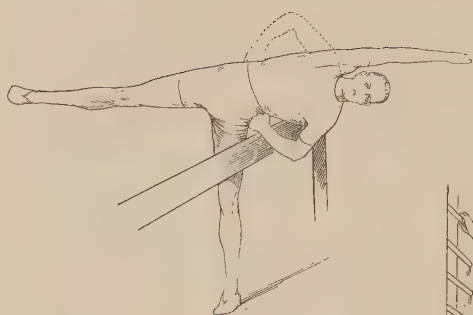


Fig. 144.

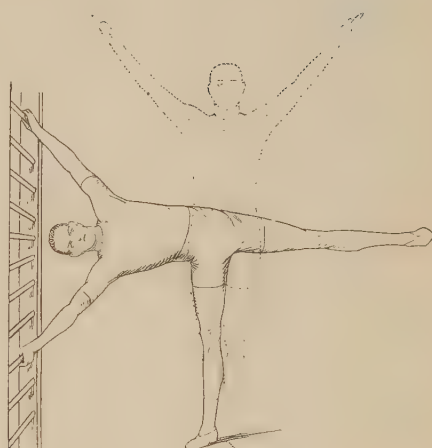


Fig. 145.

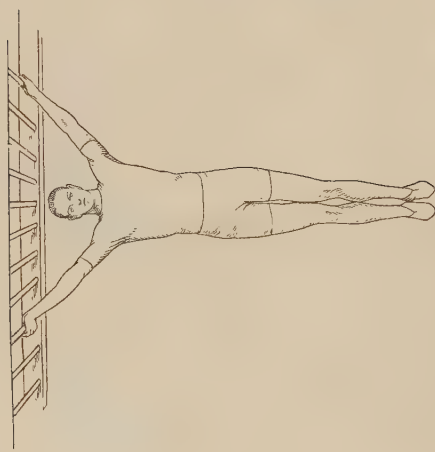


Fig. 146.



Fig. 147.

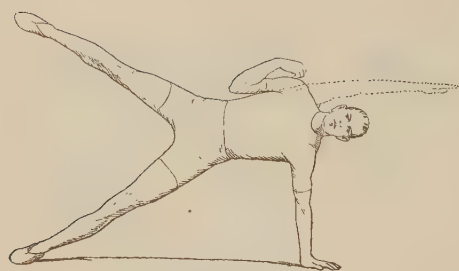


Fig. 148.

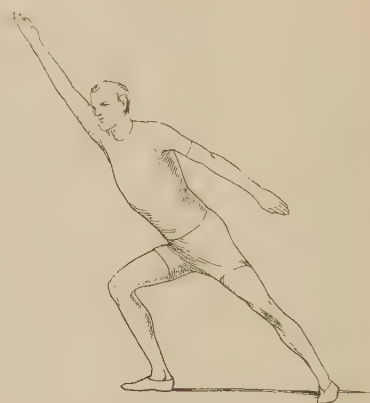


Fig. 149.



Fig. 150.



Fig. 151.



Fig. 152.

CHAPTER XII.

MARCHING EXERCISES.

Good marching calls for alertness, a sense of rhythm, and control of posture ; the standard of marching attained by a class is therefore a good indication of the value of the general physical training it has received. The head and body are held erect without stiffness, the arms swing freely, the leg movements spring from the hip, the legs are well stretched as they swing forward, and the foot is placed down with the knee straight. The body advances with the foot and must not hang back ; there should not be much turning of the shoulders and hips. The marching should be brisk and vigorous and, so done, need not occupy more than a few minutes of the lesson. The style of marching should be varied in order to maintain alertness and interest. There should be developed a strong sense of concerted movement, the boys keeping their places and intervals and moving as one in stepping off, changing step, and halting. To this end it is usually better to have the boys marching in two files than in one file. Marching is commenced with the left foot.

1. **Marking time.**

Mark—time ! Stop ! or *Class—halt !* Raise the feet alternately by bending the knees upward. At the command “ Stop ” at once stand still. At the command “ Halt.” which is given as the right foot comes to the ground and the left foot is raised, place the left foot down and raise the right foot, at the same time counting aloud “ one,” then place the right foot down alongside the left foot counting aloud “ two.” Later, the counting can be discontinued.

2. **Rapid march in large circle ; instant halt on command.**

A brisk step. Keep the circle to its original size. Boys in single file.

3. **March with instant turning about on signal.**

It does not matter at first if all the boys do not turn round the same way. Step out at once in the new direction without any check.

4. **March with varying speeds.**

Quicker ! left, right, left, right, etc. Slower ! left, right, etc. The teacher controls the rhythm by the “ left, right ” calls.

5. **March and stop instantly in named position on signal.**

The teacher names the position, e.g. *Stop crouched down !* (or *with knees full bend, with left knee raised, etc.*), and then blows the whistle.

6. March with hand clapping.

Examples : *With hand clapping, forward—march !, With a clap on the right (left) foot, forward—march !, Four steps then four claps, forward—march !* In the last of these the boys take four steps and stop with one foot advanced, then clap four times and take another four steps, and so on. The marching rhythm is maintained throughout.

7. March on the toes.

On the toes, forward—march ! Class—halt ! Stretch the body well up, but without stiffness. Stretch the ankles fully.

8. March with long steps.

With long steps, forward—march ! Keep the back straight, but increase the forward inclination of the body and the swing of the arms.

9. March with four light steps and four heavy steps.

The heavy steps are made shorter than the light steps and the feet are brought down with distinct pressure.

10. March with short steps.

With short steps, forward—march ! The feet are put down with more pressure than in ordinary marching.

11. Mark time and halt in two movements.

The command "Halt" is given as the right foot is brought to the ground ; two beats are then made, and the second (and final movement) may at first be marked by a slight stamp.

12. March, and halt in two movements.

At first the marching should be slow. *Class—halt ! one ! two !* The command "Halt" is given as the right foot is placed on the ground ; the boys then count "one" as they step forward with the left foot, and "two" as they bring the right foot forward to the left at the halt. The forward movement is checked as soon as the command "halt" is given ; this applies to all such marching exercises.

Care should be taken to explain to the boys why they count the two final movements, otherwise they may give all their attention to calling the numbers and fail to associate them with the movements. In this and similar exercises it is occasionally helpful to instruct the class in two groups, one working, the other watching and counting. This makes the manner of halting quite clear to them.

13. March forward and change direction to backward.

Forward—march ! Backward—march ! Forward—march ! Change direction immediately on the executive words. Only a few steps backward should be taken before the forward march is resumed.

This exercise gives good practice in the control of the body, the weight having to be thrown backward or forward as the changes are made.

14. March in groups (a) independently, (b) to team places, to open order, etc.

(a) March in groups, following the leaders, keeping clear of other groups.

(b) This may follow or form part of the ordinary marching exercise. The practice makes the class more mobile, and is a useful preparation for class handling in games and certain exercises.

15. Mark time, forming one file from two files, and vice versa.

Mark—time! Form one file! Both files move towards each other, the boys in the left-hand file taking up positions behind their partners in the right-hand file. *Form two files!* The files move apart again.

16. March, forming one file from two files, and vice versa.

The boys move into position as in Exercise 14, taking two steps to get into the new line, or out again to two files.

17. Mark time, increasing and decreasing intervals.

Mark—time! From front to rear—extend! Sideways—extend! on the front (left, right)—close!

The command "Mark time" is given as soon as the increase or decrease of intervals is sufficient; or a definite increase or decrease may be directed, e.g. *Double intervals from front to rear—extend!* the boys then mark time as soon as they have reached the proper distance. These movements are frequently required during the course of the lesson and should be practised as a separate exercise, as this saves time later.

18. March, increasing and decreasing intervals.

Double intervals from front to rear—extend! Those behind the leaders shorten the pace until each in turn has reached the proper distance, when he resumes the ordinary length of pace.

On the front—close! The leader shortens the length of the pace a little, and those behind him in turn do likewise as they reach the proper distance; when all have closed up, the order *Forward—march!* is given and all step out with the full pace. These movements may be applied to nearly all forms of marching.

19. Marching with combinations of steps.

Suitable combinations should be chosen, e.g. eight marching steps (feet together on eighth step), four astride jumps, eight marching steps, and so on. *Eight marching steps, four astride jumps, forward—march!* Exercise 8 is a preparation for this.

20. March, and assume various positions on halting.

Example : *With right knee raised, class—halt ! (one ! two !)* The knee is raised on the second movement of the halting. Similarly in taking arm positions, the crouch position, etc., each is taken in the rhythm of the marching.

21. Mark time with knee raising.

With knee raising, mark—time ! The left knee is raised rather quickly, held for a brief moment, and then the foot is placed down and the other knee raised. Halt as in Exercise 1.

22. March with knee raising.

With knee raising, forward—march ! Raise the left knee without any forward movement of the body, then lower the knee and advance the foot, and just as the knee straightens and the fore part of the foot touches the ground let the body fall steadily forward and raise the right knee, and so on. The command “Halt” is given as the right foot comes down, at “one” the left foot is lowered and placed forward, at “two” the right foot is brought up to it.

23. March with turning about in four movements.

Right about—turn ! one ! two ! three ! four ! The word “turn” is given as the left foot is placed down ; the forward movement is at once checked. The right foot takes another step forward and the count “one” is given as it comes down, then two mark time steps (counts “two” and “three”) are taken in which the turn about is executed ; then the left foot takes a step forward in the new direction, counting “four” as it comes down.

In turning about to the left, the word “turn” is given as the right foot comes down.

Preliminary practice may be given by starting the first movement (“one”) from a stationary position. The turn should then be practised while marching slowly.

24. March and halt with a turn to left or right.

With a turn to the left, class—halt ! one ! two ! The word “halt” is given as the left foot is placed down ; then another forward step is taken with the right foot, counting “one” as it comes down, and as the left foot begins to leave the ground the turn is made on the ball of the right foot and the left foot is brought up beside it (count “two”).

For a turn to the right, the word “halt” is given as the right foot is placed down.

25. March with single change of step.

Change—step ! one ! two ! three ! The word “step” is given as either foot comes to the ground, another forward step is taken, counting “one” as the foot comes to the ground, then the instep

of the rear foot is brought forward to the heel of the other foot, counting "two," and the front foot takes an ordinary marching step, counting "three" as it comes down.

26. March sideways on the toes.

Sideways to the left (right)—march! one! two! etc. At the word "march" the left foot is moved sideways and the count "one" is given as it comes to the ground, the right foot is then brought up to it on the count "two," and so on. The knees are kept straight and the steps are taken on the toes. *Class—halt! one! two!* The word "halt" is given when the feet are together; then another complete step is taken on the counts "one" and "two."

At first the heels are raised before stepping off and lowered after halting by separate commands; later the heel raising and heel lowering are merged into the first and last movements of the marching.

In changing direction from left to right, the command: *To the right—march!* is given when the feet are together, and a complete step is made in the original direction before the change.

27 Hop march.

Hop march—begin! left hop! right hop, etc. Take a step forward with the left foot, hop on it and raise the right knee, and so on. The position of the raised knee and the manner of halting are as described in Exercise 20.

28. March backward.

Backward—march! The steps are shorter than in marching forward, the knees are kept nearly straight, and the head is turned over the shoulder for getting the direction.

29. Slow march on the toes forward and backward.

Heels—raise! Slow forward—march! Backward—march! Forward—march! etc. Class—halt! Heels—lower! The steps are short. The knee is bent enough to let the foot come forward and is straightened as the toes are placed down. For the change of direction, the word "march" is given as the right foot is placed down, then the left foot takes another step in the original direction, the right foot is brought up to it, and the left foot takes the first step in the new direction.

30. March and halt with turn about.

Turning about, class—halt! one! two! three! The word "halt" is given as the right foot comes to the ground; the left foot takes another step forward on the ball of the foot, counting "one" as it comes down, the turn to the right about on the left foot, counting "two," follows immediately, and the left foot is then brought up to the right on the count "three."

31. March sideways, changing to forward.

Marching forward, left (right)—turn! one! two! three! The word "turn" is given when the feet are together. One more complete sideways step is then taken, counting "one" and "two," then a quick turn, "three," is made on the balls of the feet, the weight being chiefly on the following foot, and the leading foot immediately takes the first step in marching forward.

32. Slow march with knee raise. and stretch. forward.

With knee raising and stretching forward, slow forward—march! As in Exercise 20, but the knee is stretched forward and then the leg is lowered, and as the foot approaches the ground the heel of the other foot is raised and the weight of the body carried over on to the advanced foot. The command "halt" is given as the foot is coming to the ground. The rear foot is then brought up to the other. The tempo is moderately slow and a slight pause is made after each movement.

33. March forward, changing to sideways.

March sideways to the right—turn! The word "turn" is given as the left foot is coming to the ground, the right foot moves forward and the turn is made, chiefly on the ball of the left foot. The turn to the left is made in a similar way.

34. March with increasing and decreasing length of step.

The rhythm is not altered. The steps should not become too long. The directions are given during the marching. *Long (short) steps—change!* Or a march is directed containing a definite number of long and short steps in a specified sequence.

35. March with leg stretching.

With leg stretching, forward—march! one! two! three! four! At "one" the left leg is vigorously stretched forward at knee and ankle with the toes just clear of the ground; then follows a slight pause, and at "two" a step forward is taken with the left foot, and the right heel is raised. At "three" and "four" the movements are repeated with the right leg. The time is slower than in ordinary marching.

36. March sideways with turning about.

If marching to the right: *Right about—turn! one! two!* The word "turn" is given when the feet are together. At "one" a step is taken with the right foot, at "two" the left foot is brought into position beside the right, and as it is moving the turn is made on the ball of the right foot. Then a slight pause is made before marching sideways is continued to the left. A left about turn is made when moving to the left.

CHAPTER XIII.

LEAPING EXERCISES.

These exercises include jumping and vaulting. In jumping the legs only are used, in vaulting the arms also take part. The jumping exercises are sub-divided into rhythmic jumps and ordinary jumps (high, long, hurdle, etc.), and included among the latter are introductory exercises which teach the correct action required for jumping and vaulting.

The Leaping exercises cultivate the spring and elasticity of the whole body, and are "massive" exercises requiring a large output of energy. The more difficult exercises demand a high degree of skill in the exact co-ordination and timing of the movements, and many of them call for pluck and determination. Of all the gymnastic exercises they are the most attractive to boys.

It is most important to work for good form, because this means progress, enjoyment and safety. Correct action in landing is specially important, and should receive constant attention.

Skill in these exercises comes only with practice, and if the boys are to go far in them a solid foundation must be laid in the earlier exercises.

I. GAME FORMS.

1. Stepping-stones.

Two lines are drawn to represent the opposite sides of a river, and circles are drawn between them to represent stepping-stones. The boys have to get across the river without falling in, i.e. without stepping outside the circles. Variety can be obtained (1) by placing the circles in an uneven zig-zag line and by increasing the distance between them, (2) by crossing in different ways, e.g. jumping from foot to foot, hopping on one foot, jumping with both feet together.

2. Rabbit hop.

Crouch down, move the hands forward a foot or two, bring the feet up to them again with a little jump, and so on. The movements follow each other quickly. Later, a short rabbit-hop race can be taken over a marked distance.

3. Jumping the brook.

Two parallel lines are marked. The class in single file jump across the space so marked, at first directly across, later diagonally, later still diagonally from side to side, landing on one leg and jumping back from it, and so advancing in a zig-zag line.

4. Ladder jump.

Five to seven lines are drawn parallel with each other at equal short distances, or at equal long distances, or at progressively increasing distances, or irregularly. These lines constitute the ladder. The jumping goes from line to line, and from foot to foot with a short initial run, or with both feet together, or by hopping. The object is to pass over the ladder quickly and neatly without "putting a leg through the rungs," i.e. stepping in the spaces instead of on to the lines.

5. Giant strides.

The boys form up at a wall or toeing a line, and each tries to reach the opposite wall or line in as few springs as possible. The crossing may be made either with long jumping steps from one foot to the other, or by jumping off both feet, or by hopping on one foot. Care should be taken that there is no danger of slipping.

6. Obstacle race.

An obstacle course is set out with the jumps marked by lines. Any of the jumps described in the preceding games can be included in the course.

7. War dance on the spot.

This is a vigorous running movement on the spot. The performer springs high at each step, raising the knee of the free leg, and swinging his arms, fists clenched, elbows partly bent, in a defiant attitude.

8. Hopping race.

This should be taken over a short distance only. The foot may be changed with a hop during the race at a pre-arranged signal. If the race is "there and back," the going should be on one foot, the coming back on the other.

9. Racing with jumps off both feet together.

Over short distances only.

10. Jumping the yawning chasm.

This is the same as the brook (No. 3), but the lines are drawn slightly diverging. The jumping starts from the narrow end, and each succeeding jump is taken over a wider part, until everyone has fallen into the chasm, i.e. failed to clear the farther line.

11. Jumping the swinging rope.

The rope should be 10 to 15 feet in length with a small bag stuffed with tow or some soft material attached to one end. The boys form in a circle. The teacher in the centre swings the bag round on a short length of the rope and as it gathers momentum lets the rope out until it is swinging under the boys' feet as they jump. For some time the rope should be kept quite low, with the bag almost touching the ground, and the swinging should be slow. Later, the speed of

the swing can be increased or varied between fast to slow, the boys can run round in the circle to meet the rope and jump it in their run, and the rope can be swung higher.

II. RHYTHMIC JUMPS.

The exercises in this section should be taken in their natural rhythm. The movements of which they are composed, therefore, should not be taught "by numbers," or in any way but by demonstration in their natural rhythm. The boys, however, should make the small adjustments required to adapt their individual rhythms to a general rhythm of the class, and for the purpose of steadying erratic members the teacher may at any time count aloud in the general class rhythm for a few movements. The counts should coincide with the landings. It should be carefully noted that different exercises may vary widely in their natural rhythms, and that in the same exercise a change of form, e.g. higher jumping, may alter the rhythm.

The rebound from landing consists in a slight and rapid yielding and extension of the knees and ankles, in which the toes almost, but do not quite, leave the ground. In demonstrating an exercise "with rebound" to his own counting, and in counting to steady a class in such an exercise, the teacher indicates the places for the rebound by the word "and," e.g. *Skip jump, two high with rebounds, three low and a rebound—one! and! two! and! one! two! three! and! etc.*

The rhythmic jumps help to cultivate spring and flexibility and lightness of foot generally, and are an important introduction to and accompaniment of the jumping proper.

12. **Astride jumping.**

Astride jumping—begin! Jump lightly on the toes with the feet alternately astride and together. The knees bend very little. At the command *Stop!*, which should be given as the feet are coming together, stop with the heels lowered.

It should be noted that in counting for astride jumping the counts coincide with the landings, the first count falling with the landing *after* the first jump. The counts are for controlling the rhythm, they are not executive words for the jumps.

The following variations can be employed :—

(i) **Astride jumping with arm swinging sideways.** The arms swing sideways as the legs go apart, and downward as the legs come together.

(ii) **High astride jumping.** A strong upward spring is made at each jump and the rhythm is slower. On landing, the knees are allowed to bend a little more than in the ordinary astride jumping.

(iii) **Astride jumping moving forward to eight counts, and backward to eight counts;** and also **with arms swinging sideways, and with high jumping.**

(iv) **Astride jumping with rebound on each landing, and also moving forward.**

(v) **Astride jumping with quarter turn in the jump following each second or fourth count (landing).** In turning at each second count, the jumps run : astride, together, astride with a turn, together, astride with a turn, etc., and similarly with turning at each fourth count. Turn right round one way, then the other.

(vi) **Astride jumping with a turn about (with a high jump) in the jump following each fourth count.**

(vii) **Astride jumping with knee bending.** The knees are bent to a right angle in each landing. The rhythm is rather slow.

Astride jumping is also combined with other rhythmic jumps, e.g. Asd. jump to four counts, skip jump to four counts, and so on.

13. (St.-Asd.) Jump with Hl. clicking, with rebound on landing.

Jump high and bring the heels together in the air, then separate the legs and land astride, rebound and jump again, and so on.

14. Skip jumping.

Skip jumping—begin! Skip lightly up and down on the toes without pause, keeping the feet together. Keep the head high. Stretch the ankles and knees when in the air, and let them “give” easily in landing. At the command *Stop!* stop with the heels lowered.

Skip jumping can be either high, with a vigorous use of the legs, or low with a less vigorous use, or it may be alternately high and low, or it may be done with a rebound at each landing. Different combinations may be used, e.g. two high skip jumps with a rebound after each, followed by three low skip jumps and a rebound after the third. Skip jumping may also be done moving forward, backward or sideways, or with turning.

15. (St.-Kn.Fl.Bd.) Skip jump.

Skip up and down without any appreciable extension of the knees (see Balance Exercise 8).

16. Tapping step.

Place the hands on the hips. Hop four times on the left foot with the right leg extended forward, the toes turned a little outward and tapping lightly on the ground ; then give a little spring and change the feet, and so on. The step can be varied in a number of ways, e.g. four hops on each foot, then two, then one.

The movement can also be carried out with the toe tapping alternately forward and sideways, forward and backward, or sideways and backward.

Later, on one hop the toe is tapped, and on the next the knee is raised and turned outward a little with the toe pointing towards the other side, and so on. (See Exercise 22.)

17. Spring step.

This is a running step on the spot with the free leg thrown up forward with the knee straight. It is a strenuous exercise and should not be continued for more than a brief interval. Later, it can be done moving forward, or on the spot with the legs thrown progressively higher and higher and then lower and lower and so on.

18. Hopping with Kn. raised, four hops alternately on each foot.

The knee is raised as high as possible and may be held up by the hands.

19. (St.-Toe.S.) Hop. with rebound on alt. Ft. and with Lg. swing. s.

Hopping with rebound and leg swinging sideways—begin! Hop on the standing leg and swing the other sideways as high as possible without turning the body; change the feet in the rebound. Later, this can be done moving forward and backward.

It can also be done with the arm on the same side swinging up with the leg to the Am.S. or Am.M. position, and later with the other arm swinging forward.

20. Swinging step.

Hop on one leg (left, say), swing the other (right) leg sideways as high as possible and then down and land on the right foot, swinging the left leg sideways at the same time, and so on. One leg, as it were, kicks the other away from the central position. It is a strenuous exercise and should be brief.

The exercise can also be done moving forward.

It can also be done with the arm on the same side swinging up with the leg to the Am.S. or Am.M. position, and later also with the other arm swinging forward.

21. (St.-Toe F.) Hop. with Ft. chang.

Hop and change the feet at each hop, sliding the feet forward and backward close to the ground.

22. Hopping with Toe plac. f. and high Kn. rais.

Hop on the left foot and advance the right foot as in the preceding exercise, hop again on the left foot and raise the right knee turned a little outward with the lower leg directed a little to the other side; repeat several times, then land on the right foot, at the same time advancing the left foot, and repeat, raising the left knee.

23. (St.-Toe S.) Hop. with Ft. chang.

Change feet at each hop, sliding the feet in and out close to the ground.

24. Hopping with Kn. rais. and opp. Am. swing. f.

Hop on the left foot, raising the right knee and swinging the left arm forward; hop again on the left foot and change feet and arms. Later, the right arm can be swung sideways as the left arm is swung forward, and the arms changed as in Arm Exercise 36.

III. JUMPING.

(i) *Introductory Jumps.*

The purpose of these introductory exercises is to teach the correct action of the legs and the proper carriage of the body in jumping and vaulting. They have much of the localized effect of the Leg Exercises, and are carried out by definite commands so that the form at all points may be controlled.

25. **Prepare to Jump.**

Prepare to jump—go! one-two! three! four! At “one-two” bend the knees to a little less than a right angle and the ankles to the fullest extent, so that the heels are near the ground, and without any pause stretch the legs with sufficient force to lift the body high on the toes, but without actually leaving the ground. This is done rapidly, and represents the spring. At “three” bend the knees again to represent the landing from a jump. At “four” stretch the knees and lower the heels to the ground. It is important that there should be no pause between the first bending and extension of the legs, no hanging for however brief a moment with bent knees. If this were done in actual jumping much of the force of the spring would be lost. The counts “one-two,” therefore, are not to mark two separate movements in the action, but to indicate the rhythm, and by inflexion of the voice to stir the pupils to vigorous action. The body must be kept erect and the head high throughout the exercise, and the knees as they bend for the spring and also in the landing should be turned well outward. After some practice with the teacher’s counting, the boys may be allowed to count for themselves, remaining for a moment balanced high on the toes before the third count. Fig 153.

26. **Upward Jump.**

(i) Free form. This is taken at the very beginning of the training, before the preceding exercise has been taught (it must wait until the Leg Exercise of heel raising and knee bending has been learnt), in order to encourage the natural spring and to give a foundation on which to build a more precisely controlled action. The exercise should be demonstrated to the class and then carried out by some such general direction as: *Jump as high as you can (once, twice, etc.)—go!* In the repeated jumps, it may help to induce a good spring if the difficulty of balance is eliminated by holding a wall bar at chest height.

(ii) Controlled form. *Jump upward—go! one-two! three!* This is a development of “Prepare to Jump”; at “one-two” the knees are bent and straightened with the utmost rapidity and force so that the body is projected directly upwards, and leaves the ground fully extended from the head to the tips of the toes. No count is required for the landing, but the position is held in good balance until the count “three,” when the knees are stretched and the heels

lowered. After some practice with the teacher's counting, the boys may be allowed to count for themselves, and later the counting is dispensed with. *Jump upward—go!* Fig. 154.

Two or three consecutive jumps may be made, either with or without counting: *Jump upward twice (three times)—go! one-two! one-two! (one-two!), three!*

Upward jump may be combined with arm swinging sideways, or forward and upward, or with a clap of the hands above the head. *Jump upward with arm swinging sideways—go!* The arms are swung sideways as the leap is taken and lowered as the knees are being bent in the landing. For arm swinging forward and upward, the arms are carried backward as the knees are bent for the spring. These exercises help to teach co-ordinated action of arms and legs in lifting the body.

Another form of combined leg and arm movements is upward jump with arm swinging forward and downward. This is designed as a preparation for the downward beat of the arms in vaulting. *Jump upward with arm beat—go!* As the knees are bent for the spring, swing the arms forward with the elbows partly bent, the fingers partly closed and the backs of the hands upward, and while the body rises in the leap strike forcibly downward to the sides with the elbows fully extended, stretching the back quickly at the same time.

Upward jump is also combined with leg swinging sideways as a preparation for astride vaulting. *Jump upward with leg swinging sideways—go!* The legs are swung as wide apart as possible as the feet leave the ground, and as rapidly together again, so that the feet may be together as they touch the ground in landing. The back should be thoroughly straightened as the leap is taken. The jump may be repeated twice in succession, with or without counting. Later, arm swinging sideways can be added, the arms and legs moving sideways and downwards together.

Upward jump with a quarter turn and later a half turn is a general exercise for control. *Jump upward and turn left (right) (left or right about)—go!* The body is turned quickly as the leap is taken so as to face in the named direction before the feet again touch the ground. Two consecutive jumps can be taken, with both turns in the same direction or the second in the opposite direction.

27. Forward jump.

(i) Free form. The remarks on the free form of the preceding exercise, except those with regard to the wall bars, apply to forward jumping.

(ii) Controlled form. *Jump forward—go! one-two! three!* or *Jump forward—go!* The leg action is the same as in the upward jump, but as the knees are bent for the spring the body is inclined a little forward, and when the jump is taken the legs are swung forward and the back is well stretched so that in landing the body is slightly inclined backwards to the extent that it stops in full balance with no tendency to pitch forward. Balance is greatly

assisted by keeping the head back and the eyes up. This is the form of landing from all running jumps and forward vaults when the landing is on both feet. The arms may be swung forward to assist the spring and pulled sharply back in landing to assist the balance. In this exercise the effort should be made to jump high rather than far. Fig. 155.

When the form of the exercise taken from the St. position has been thoroughly grasped, the footwork required in the run up for a jump or vault may be developed by the following practices :—

(a) (St.—Ft.F.) F. jump.

Left (right) foot forward—place ! Jump forward—go ! Place the left foot forward about $1\frac{1}{2}$ foot-lengths, raising the back heel a little. At the word “go” swing the rear leg vigorously forward and upward and spring off the other leg. Bring the legs together for landing, bend the knees as usual, then stretch them and lower the heels. Spring high rather than far. Fig. 156.

(b) One step and F. jump.

One step and jump forward, begin the left (right) foot—go ! one ! two ! At “one,” take a quick step forward with the named foot and without placing the heel down, spring forward off it, swinging the other leg well forward at the same time, and land as described above. At “two,” stretch the knees and lower the heels. Later, the boys can count for themselves.

(c) Two (Three) steps and F. jump.

The steps are taken quickly on the toes, and the jump is made from the last step as in (b). For two steps, the counting is “one” for the first step, “two” for the second step and the jump, and “three” for straightening the knees after landing. Similarly for the jump with three steps. It should not be necessary to take these exercises with counting more than once or twice, though counting may be returned to if needed for controlling the landing. The development of an easy natural run-up is hindered by continued counting.

(d) Three steps and F. jump, land and jump u. off both feet.

Three steps and jump forward, land and jump upward—go ! On landing, an upward jump is made as in Exercise 26. Later, a jump forward off both feet is made, and after one or two practices this final jump can be taken over a low rope, the effort being made to jump high rather than far. This exercise is an introduction to the double leap, off one foot and then off both feet, required in vaulting. The rope helps the boys to judge the correct distance for the final spring.

(e) “Seven Jumps.”

This provides a further development ; it teaches the boys to gather speed as they come up to a jump, and to use either foot indifferently in jumping. Eight lines are marked on the

ground, the second 2 feet from the first, the third 2 feet from the second, the fourth 3 feet from the third, and each succeeding space a foot wider than the one before. The exercise consists in running over the lines, setting a foot on each, and getting up enough speed to clear the last long jump. The performer starts with a named foot on the first line.

A modified form of this exercise is used for the purpose of teaching the vaulting jumps at the end of the run. The lines are marked rather closer together, say 5 feet between the last two, a 2-foot circle is marked beyond the last line, and beyond this again a space is marked off by another line. The performer lands on both feet in the circle and jumps forward off both feet over the last space. Later, the jump from the circle is made over a low rope, and finally to astride sitting on the back of a horse placed lengthwise just beyond the circle.

(f) For teaching control of the limbs and body, the forward jump, preceded by one, two or three steps, can be made with a turn in the air to the left or right. The turn is to the left when the left leg makes the final spring, and to the right when the right leg makes it. *With one step and a turn, jump forward—go!*

28. B. jump.

Jump backward—go! Swing the arms forward as the knees are bent, and backward as the jump is taken.

29. One step and S. jump.

A step to the left (right) and jump sideways—go! Take a quick step to the left on the ball of the left foot and immediately jump high to the left off both feet. Land as usual.

(ii) *High, Long, Hurdle and Downward Jumps.*

30. Running High Jump.

Take a short run, increasing the speed up to the point for taking off; bend the knees and raise them well, and as the feet clear the rope stretch the leg down and land as described in Exercise 27. The jump is taken at right angles to the rope. The boys may be directed to jump off either foot. The jump and landing may be controlled by requiring the performer to land and remain in a circle marked on the farther side of the rope. Fig. 157.

31. Running Oblique High Jump.

Stand towards one end of the rope, run obliquely towards it, spring from the foot farthest away from it, swing the other leg forward and over it, follow with the jumping leg, and land on one or both feet. Fig. 158.

The exercise can be introduced with one, two, or three steps, as in Exercise 27, the action being the same as that of the Forward Jump, except that the spring is taken sideways. An initial practice

for acquiring the proper action can be taken over a line marked on the ground, and without the rope. The jump should be taken both to the right and to the left. Unless these introductory exercises are employed, it will be found that a proportion of the boys will persist in jumping off the wrong leg from one side or the other.

32. Standing High Jump.

The stance is taken facing the rope and at a distance from it about equal to its height. The action is similar to that of Forward Jump (Exercise 27), except that the knees are whipped up quickly to the chest so that the feet may clear the rope. An upward swing of the arms in taking the jump helps to get height. At first the boys may be allowed to hop a few times on both feet before taking off.

A succession of standing jumps may be arranged, the landing from one jump being used for the spring over the next rope.

33. Running Long Jump.

The run-up is usually longer and faster than that required for a high jump; it is speed in the run and height in the jump which determine the distance covered. This jump is unsuitable if there is any risk of a slip on landing. On smooth floors and hard playgrounds, it is best to limit the length of the jump by chalk lines and not to permit any attempt to jump as far as possible; and with this in view, the length of the run-up should also be limited.

34. Standing Long Jump.

Toe the line, rise on the toes and lift the arms forward and upward above the head, pause here a moment in full balance, then swing the arms and body down, bending the knees, and while actually falling forward throw the arms and body forward and upward and spring. The jump can be taken over a marked space or as far as possible. In the latter case a mark is made where the heels land, provided there is no stepping back. In this jump the chance of a slip or of falling backward on landing must be considered with reference to the surface and the shoes worn. Fig. 159.

"As far as you can get in three standing jumps" is a variety in which the jumps are taken in quick succession without any pauses or preliminary hops before the jumps.

35. Hurdle Jump.

This is taken with a run, and is essentially a long flying stride with the body and limbs kept as low as possible so as to reduce the effort of lifting the body, and the loss of speed in doing so. The leading leg is lifted straight forward and the trunk is bent down to it as closely as possible, the arms being flung out sideways to keep the balance and to prevent the shoulders from turning away from the leading leg; as the body passes over the rope or hurdle, the leg which made the spring is bent with the knee and foot lifted sideways. The leading leg comes down for the landing and the body is raised

as soon as they have passed over the obstacle, and as the landing is made the other leg comes forward for the next stride.

A simple exercise for younger boys is to take running jumps from foot to foot over a row of low obstacles. A more definite introduction is provided by a running hurdle jump for length over a marked space, lifting the knee of the jumping leg, landing on one foot and running on with a full stride. Hurdle jumping proper should begin over a rope placed quite low, and as the boys learn to get the leg up sideways the rope can be gradually raised. It should be possible to get good style with the rope at a height of 2 feet. Later, the hurdling is done over two or more ropes, the chief consideration being to get the three strides between the jumps. The distance between the jumps is gradually increased.

36. Downward Jump.

This jump is chiefly a matter of controlling the balance in jumping and landing. The difficulty increases with the height from which the jump is taken. In the early stages the boys in landing may bend their knees fully and place their hands on the ground, but they should gradually be taught to land with the body upright and in balance, and to use their legs to absorb the shock of landing and so to require no mats for landing on. The legs should be fully extended as the toes touch the ground and should not yield too readily under the descending weight, but control it and bring it to rest gradually. They should begin to control it from the moment the feet touch the ground, and therefore the leg muscles need to be braced in anticipation of this moment.

The manner of jumping depends on the height. If this is small the jump may be taken from the standing position and off one or both feet. The jump off one foot may be merely a hop off the bench after carrying one foot forward just clear of its edge, or one leg may be swung well forward and a forward jump, even an upward and forward jump, made, so that the landing is farther away from the apparatus, and this may be preceded by a short run, e.g. along the top of a bench placed on the ground or hooked up to a low beam. The jump off both feet may be made with a small forward hop, or with a vigorous upward and forward spring in which the whole body is stretched out strongly. Fig. 160. The latter method is used in combination with a running high jump on to a low vaulting box, the landing on the box with both feet being used for the spring in the downward jump, in which, finally, the arms may be swung forward and upward, and brought to the sides in the landing. Of this kind is the standing long jump taken from the top section of the vaulting box.

When the height is a little too great for a jump from the standing position, the knees may be quickly and fully bent and a hop down taken from this position.

From greater heights it is necessary to steady the body by placing one hand on the apparatus from which the jump is taken, and

to land sideways to the apparatus. This is done at first by taking the crouch position with one hand on the apparatus and then jumping down deliberately. Later, the performer may crouch down quickly and jump immediately the hold has been taken, and this may be preceded by a short run, e.g. up a bench hooked to a beam at shoulder height or above. If the apparatus is above shoulder height, the grasp is retained until the shoulders have passed it.

A special form of downward jump is that taken from the Bal. St. position on the beam. One leg is carried sideways and a jump to that side is made with the other leg; the hand grasps the beam as the feet touch the ground and is brought to the side when the body is steady.

37. (St.-1 Ft.Rst.) Hi. Jump over bench.

The bench is first used with the balance rib uppermost, and later with the broad side up. Place one foot on the bench (the ball of the foot on the rib), and at the command *Go!* step up and jump forward, swinging the free leg forward at the same time, and land two or three feet beyond the bench, with the head and eyes up and in good balance.

38. Run. Hi. jump with hi. take-off.

The top section of the vaulting box is used for the high take-off, and the rope is placed about a foot beyond it. The rope may be placed at a greater height than can be cleared from the ground, and this makes the landing more difficult on account of the greater drop on the other side. A bench may be used if a vaulting box is not available, but it should be held steady by a boy at each end.

39. Hop, step and jump.

Toe the line, lift one foot, hop as far forward as possible, take a long stride forward with the raised foot, and jump from it, landing on both feet. Mark the place where the heels finally land. Later, the exercise can be taken with a run, the foot which is used in making the hop striking a starting mark on the ground, as in the Long Jump.

40. Combined High and Long Jump ("Fence and ditch").

The ditch is marked by a line on the far side of the jumping rope.

41. (Hg.-Bk.Rst.) D. jump. (Wall bars).

The legs are swung forward, then downward with a sharp hollowing of the back, which throws the buttocks and shoulders forward clear of the bars. At this moment the grasp is released and the body falls, upright and clear of the bars, and lands in good balance. The object of swinging the legs is to permit of the jerk which throws the body clear out from the bars, not to get the landing as far away from the bars as possible. Fig. 161.

42. (Hi.Sd.St.) D. jump. s. (Wall bars).

The starting position is taken standing on the wall bars with one side towards them and the nearest hand grasping at head height,

the other at chest height. Take the outer hand and foot off the bars and raise the leg sideways and the arm midway, at the same time straightening the other arm and letting the body fall away from the bars until the arms and legs form the letter X. Lower the outer arm and leg quickly and at the same time pull the body into the bars a little, then immediately throw the outer arm and leg out again, thrust the body outward and spring sideways away from the bars. Fig. 162.

43. Running Hi. jump through a window.

The window is formed by placing the jumping standards fairly close together and laying two ropes across them so as to form a square opening through which the jump must be taken without touching any part of the apparatus. The difficulty is increased by decreasing the size of the window and by placing it higher. The exercise requires nimbleness and skill.

IV. VAULTING.

44. Vaulting to Bal. Sup. position.

The exercises described below are introductory to the other kinds of vaulting because they help to teach the action required in making the spring for a vault, and also the thrust and support of the arms on the vaulting apparatus. Their thorough practice helps to secure form and progress in all kinds of vaulting.

(St.-F.Gr.) Vault. to Bal. Sup.

At first the beam is set at just over hip height and is raised gradually to chest height. Grasp the beam with the hands separated by the width of the shoulders, the wrists up and the fingers and thumbs on opposite sides of the beam. The elbows must be straight, and the back stretched. At the command *Mount!*, hop off both feet, land with bent knees and heels well down, and immediately spring upward, at the same time pressing down with the arms and pulling the body forward to the Bal. Sup. position. In the Bal. Sup. position the hands should be close to the thighs, the body stretched up as high as possible between the straight arms, the head pressed a little backward, the back a little hollowed, and the legs carried well backward with the knees stretched. Fig. 163. At the command *Dismount!*, swing the legs forward under the beam, and backward again with sufficient force to lift the thighs clear of the beam, and, as the thighs lift, push backwards with the arms and land in the usual way, but retaining the hold on the beam.

After some practice in mounting and dismounting, the landing may be used for an immediate spring back to the Bal. Sup. position. *Dismount and mount again—go!*

Later, the performer stands away from the beam and takes two or three steps forward before making the spring upward off both feet, as in Exercise 27 (*d*). *Two (three) steps and mount—go!*

Count "one," "two," "three" ("four") for the steps and leap. Jump with the hands ready but do not grasp the beam until the feet have left the ground. The later the grasp is taken the better. Dismount holding the beam as described above, or with sufficient swing of the legs and thrust of the arms to send the body backward beyond reach of the beam, and land in balance. *Clear of the beam—dismount!*

After a little practice with these steps, a short run can be substituted as described in Exercise 27 (e).

45. **Astride vault.**

There are three forms of this vault :—Astride vault, Astride vault backward, and Horizontal Astride vault.

(a) **Astride vault.** A sufficient run is taken to carry the performer clear over the apparatus. The leap is made well clear of and towards the apparatus, and as the body rises, slightly inclined forward, the hands beat down swiftly and strongly on the nearest part of the apparatus so as to swing the whole body up to the erect position with the legs thrown wide apart and the head held high. In this attitude the body passes over the apparatus with a leg on each side of it. The legs are brought together for landing as soon as they are clear of the apparatus. The secret of success is to get up speed in the run, not to check it in the leap, and to jump high. Fig. 164.

The first practices should be taken on the horse, placed lengthways, and the vault made so as to sit astride of it, the object being to reach a position farther along the horse at each attempt. The performer should come down into the sitting position with the legs well forward and the body and arms held back. The body must not be allowed to tumble forward on to the hands. In the descent, the legs may be closed on the apparatus so as to avoid coming down with a bump. The performer, if he has not got far along the apparatus, dismounts backward, by first rocking the body backward and the legs forward, then throwing the body forward on to the hands and the legs backward with sufficient force to lift the seat off the apparatus, so that the body for a moment rests on the arms, which, with a push, send it backward clear of the apparatus. If the sitting position has been taken too far along the apparatus to permit of dismounting backward, the rock backward and throw forward is made as before, but the legs as they rise up clear of the apparatus are carried over to one side, and with a sideways thrust from the arms to carry the body clear, a landing is made by the side of the apparatus with a steady hand upon it.

The first practices of the complete vault are taken over the buck placed lengthways, and later crosswise. When good spring and style have been acquired the vault may be taken in the form of leap-frog. Fig. 165. The one giving the "back" places himself with his back to the performer, advances one foot

and keeps both legs straight, and the weight of the body principally on the back leg. He inclines his body forward more or less according to the ability of the performer, either placing both hands on the advanced knee, or holding himself more erect with arms folded across the chest and head bent forward, or he may stand entirely erect. Similarly, the height of the buck is gradually increased. Later, the vault may be taken over the horse or box lengthways. More speed is required than for a vault over the buck. Height in the spring, which is so important in these long vaults, may be encouraged by practising astride vaulting to a standing position on the apparatus as far forward as possible. From this position the performer can dismount in two ways: (1) He jumps down forward; (2) he stoops quickly, places his hands near to the end of the apparatus, throws his legs backward, separates them, and as they swing forward on each side of the apparatus, pushes with his hands and lands clear.

Another of the more difficult forms of this vault is taken over the pommelled horse placed crosswise or over the beam-saddle, the hands grasping the pommels. Fig. 166. Not much run is required, but the spring must be high, and the legs widely separated. While the legs are coming up to the apparatus the body has to be inclined forward a good deal more than in the preceding vaults, and therefore a specially strong thrust of the arms and straightening of the back are required to bring the body erect when clearing the horse. The first practices should be taken to a standing position with a foot on each side of the pommels. Later, the exercise can be taken over the horse or beam without pommels or saddle.

(b) **Astride vault backward.** The run-up and the leap are the same as for the ordinary astride vault, but in the act of leaping a sharp turn is made, assisted by the arms, so that the body passes backwards over the apparatus. The exercise should be taken first to a sitting position on the horse or box placed lengthways, and then over the buck. Later, the vault may be taken over the horse placed lengthways, and at first with the farther end lower than the near end, so that the performer will slide off if his leap is not sufficient to carry him clear over. In these vaults there should be two efficient persons standing by on the landing side of the apparatus to catch the performer if he makes a mistake.

(c) **Horizontal Astride vault.** This vault is taken on the horse or box placed lengthways. The performer, keeping his legs together, dives forward from the leap and places his hands on the far end of the apparatus; this checks the forward movement of the body and allows the legs, which are now separated, to swing forward on each side of the apparatus until the arms can push the body forward for landing clear of it. Fig. 167. A good height in the spring is required so that at the moment

the hands touch the apparatus the seat is a little higher than the shoulders. The best way to teach the proper action is to use the top section or two top sections of the box, with a jumping line across the near end and a few inches higher than the box. The performer must then jump high in order that his legs may clear the line. Later, a buck may be placed at the near end of the box. Fig. 168.

A simple introduction, which gives practice in pitching on to the hands, is provided by "Cat Jumping" along a bench. The performer, starting at one end in a crouching position and grasping the edges of the bench, first advances the hands and then the feet in a series of bounds to the other end. The exercise can also be taken up a sloping bench, hooked up at shoulder height, with a face vault sideways at the top for dismounting. It can also be taken along the horse or box, finishing with astride dismounting or a hand spring at the farther end.

A much more advanced form of this exercise is obtained by placing a horse across the end of the box and diving over this on to the box.

46. Heaving vaults.

These are vaults in which the body swings by the hands from an overhead apparatus and is projected forward over another apparatus by a heave of the arms. The apparatus on which the swing is taken may be either one or two ropes or a beam.

There are several introductory exercises to teach the swing and heave without any definite obstacle to be cleared. These are as follows :—

(a) **(St.-In.U.Gr.) Swing. f. and b., and D. jump at end of b. swing. (2 ropes).**

Grasp the ropes at shoulder height, walk backward until the arms are extended, then run forward and as the ropes become vertical, spring, heave with the arms and lift the knees ; retain this position during the forward and backward swings, and at the end of the latter straighten the legs down, let go the ropes and drop on to the feet, landing as usual. Fig. 169. Later, grasp the ropes or rope lightly and take two or three steps backward until the arms are extended, then run forward, allowing the hands to slide up the ropes, and as the ropes become vertical, spring, catch the ropes as high as possible, heave, and swing the knees up to the chest. The backward swing may be augmented, and therefore also the height of the downward jump, by swinging the legs forward at the end of the forward swing, at the same time straightening the arms, so that in the backward swing the body is extended.

(b) **(St.-In.U.Gr.) Swing. f. and D. jump. (2 ropes).**

The start is made as in the preceding exercise, but at the end of the forward swing the legs are straightened down, the ropes

let go and the landing made as usual. This, as the preceding exercise, is taken first with two ropes, then with one.

(c) **(Fr.St.) Jump and swing f. and b., and D. jump in the b. swing. (Beam).**

The beam is placed just above the reach of the finger tips. Stand facing and about 2 feet away from the beam. Jump forward, catch the beam and let the body swing forward and backward, and at the end of the backward swing let go the beam and land in balance. Swing the legs up in advance of the body in the forward swing, and back in line with the body in the backward swing. After some practice the swing can be increased by heaving with the arms as soon as the hands have grasped the beam, and allowing the arms to straighten out at the end of the forward swing. A little push from the beam as the hands let go their hold helps to set the body upright for landing.

(d) **(Fr.St.) Jump and swing f., and D. jump over marked space (Beam).**

The beam is placed as in the preceding exercise, and a line is marked on the ground three or more feet beyond it. Jump and heave as in the preceding exercise, swing the legs quickly forward so that during the forward swing there is an angle between the legs and body. Near the top of the swing quickly straighten out the whole body, let go the beam, shoot forward, and land beyond the line in balance. Fig. 170.

When the foregoing introductory exercises have been well practised, the following Heaving vaults can be taken up :—

(Sd.St.) Obl. Heav. vault. (2 beams).

At first the lower beam is placed at knee height, and is gradually raised to hip height; the upper beam is placed at the full reach of the finger tips or a little lower. Stand with one side to the beams, jump upward and forward and catch the upper beam with both hands, the hand on the side farther from the beam a little in advance of the other hand. As the body swings forward along the side of the lower beam, heave with the arms, swing the legs high up between the beams, and as the body swings over to the other side, lower the legs, straighten out the body, let go the upper beam, and land on the opposite side of the beams with a steadying hand on the lower beam. Later, and with the upper beam a little lower, the jump is made more forward, the hands are placed wider apart, the legs and body are straightened out in a nearly horizontal position between the beams and as close to the upper beam as possible, and the heave of the arms shoots the body forward so that the landing is made on the other side of the beam well in advance of the spot from which the jump was taken. The

exercise can be continued in this way from side to side and from one end of the beams to the other. Fig. 171.

Run. Heav. vault. (2 ropes and over jumping line, box, etc.).

The obstacle to be cleared may be either a jumping line, a beam, a vaulting box, or a horse. The obstacle is placed from 4 to 5 feet from the ropes, and at first should be set low. Swing forward as in (a) above, and when near the top of the swing quickly straighten out the legs and body, let go the ropes and allow the body to shoot forward over the obstacle. Fig. 172.

Later, the vault may be taken so as to remain standing on the top of the box (placed crosswise and rather farther from the ropes). The ropes are not let go until the position has been taken. The exercise requires a nice adjustment of the swing and good balance.

Run. Heav. vault. (Single beam and over jumping line, box or horse).

The beam is set as in (c) above, with the jumping line, box or horse placed 1 to 3 feet beyond it. The jumping line may be gradually raised until it is nearly at the same height as the beam. Swing forward as in (d) above, but raise the knees and when near the top of the swing quickly extend the whole body and allow it to shoot forward (or forward and upward) over the obstacle.

Run. Heav. vault. (2 beams).

The lower beam is set at knee height (later a little higher) to serve as the obstacle to be cleared. As the knees must be brought up very quickly after the jump in order that the feet may clear the lower beam, the jump needs to be more forward than in the preceding exercise, and the upper beam should therefore be set at first a little under full stretch height. Jump and catch the beam as in the preceding exercise, lifting the knees and shooting forward as before. A line to be cleared on the far side may be drawn on the ground.

47. Face vaults.

These are vaults in which the body swings to one side in the leap and passes over the apparatus with the face towards it. The following introductory exercises are employed to teach the correct action :—

(a) (Sd.St.) Face vault with bent knees, later with legs thrown back. (Sloping bench).

The bench is hooked up at an angle of about 20°. Stand at one side, bend a little forward and grasp the two edges of the bench. Make a preliminary hop or two, then leap over to the other side of the bench, bending the knees and throwing the seat up as high as possible. Retain the grasp in landing. Later, when the seat can be thrown well up, fling the legs backward and try to straighten out the body as it passes over

the bench, swinging the legs down again for landing. Further progress is made by grasping the bench at the moment of making the jump. Fig. 173.

(b) (Sd.St.) Face vaults with bent knees along horizontal bench or beam.

The vaults are taken from side to side and from one end of the apparatus to the other. Here, again, the object is to get the performer to throw the seat high, so that he may become used to supporting his weight on his arms while the body swings sideways over the apparatus. The arms must be straight and the head should be kept back as far as possible. When using the beam, grasp it with the thumbs on opposite sides. Land with the knees well bent.

(c) Run. up sloping bench to Crh.-Gr. posn., and vault. down. s.

The bench should have a slope of 30° or over. Run up the bench, crouch down and grasp its edges, then push up with the arms and fling the legs backwards as high as possible, straightening out the whole body and throwing the head back, and land on one side of the bench.

Later, at the top of the run-up, with one foot forward, stoop quickly, grasp the bench, keeping the arms straight, fling the rear leg backward, followed by the other, and vault down sideways.

(d) Run. Obl. Face vault. (Sloping bench).

The bench is hooked up at an angle of about 30°. Take a short run diagonally towards the bench, grasp the sides at about hip height or a little lower, and make the spring; thrust with the arms and throw the body and legs out straight and as high as possible as they pass over the bench, and swing the feet forward in line with the hands for the landing. Fig. 174.

(e) Run. Face vault with bent knees to sit. asd. apparatus; dismt. by swing. legs f. and b. (Box or horse crossw.).

Run up and leap directly towards the apparatus, and beat down squarely on it. A common fault is to place the hand towards which the swing is to be made in advance of the other. If the vault is to the right, swing the body and legs up to the right, pivoting on the left hand and pushing off with the right. In this exercise no attempt should be made to straighten out the legs and body while they rise up, but the seat should be thrown as high as possible. The hand in the way of the swing is shifted to the other side of the horse opposite to the pivot hand, the legs are separated when above the apparatus, and astride sitting position is taken. The performer then sits upright with his arms by his sides. A common fault is to lean to one side in placing the hands on the

horse and attempt to throw the legs up to the other side directly from the spring. Much of the force of the leap is lost in this way and it is difficult to get the legs up to the horse.

Dismounting sideways is done as in Exercise 44 (a).

These introductory practices lead to the following Face vaults :—

Run. Face vault (Beam, box, or horse crosswise).

Run up and leap as in (e) above, but with sufficient force to swing the body and legs to a horizontal position (head thrown back) as they pass over the apparatus ; then rapidly swing the body downward and forward so as to land with the steadying arm at right angles to the apparatus. The exercise can be taken at first on fairly low apparatus, attention being given to throwing the seat high and the head well up and to swinging well forward in the landing, rather than to getting a full extension of the body while passing over the apparatus. A common mistake is to take off too close to the apparatus and to place the hands upon it too soon. The higher the body rises above the apparatus before the hands are placed on it the better. Fig. 175.

Run. Hi. Face vault (Low box crosswise).

In this exercise the body is thrown up to the Hand-standing position, one hand as usual being transferred to the other side of the apparatus, and here it remains poised for a moment before it is swung down for landing in the usual way. The vault should be taken at one end of the box so that the teacher, standing at the end, can steady the performer. In the first practices the aim should be to throw the body as high as possible with the legs bent, so as to get the performer accustomed to the lift, the balance, and the swing down under less difficult conditions. The following is a useful introduction : Stand on the box at one end and facing the other, take a quick step forward and place the hands on the box near to the other end, then throw up the rear leg followed by the other into the Hand-standing position, and from here swing down to land as before.

Run. Face vault with high take-off. (2 beams, beam and bench or box).

The lower beam is placed at knee height, the upper at waist or chest height above it. Take a run and spring on to the lower beam with one foot, grasping the upper beam at the same time ; then with a strong thrust on the lower beam, vault over the upper beam, shifting the pivot hand down to the lower beam to steady the landing.

For introducing the exercise, a bench or a section of the box can be used in place of the lower beam. The bench must be prevented from slipping.

48. Gate vaults.

These are closely akin to the Face vaults :—

Run. Gate vault (2 beams).

The lower beam is placed at first rather below knee height, the upper beam at waist height above it. Run up and jump on to the lower beam with one foot, lean over the upper beam and grasp it with one hand (thumb over the top and the fingers on the same side as the legs), reach down and grasp the lower beam with the other hand directly under the upper hand (fingers in front, thumb behind), then swing the legs up and over the beam, pushing up with the lower arm, pulling with the upper arm, and swing down to land sideways to the beams. As the feet approach the ground, remove the hand from the lower beam and shift the upper hand down to it so as to steady the landing. Fig. 176.

(Bal. Sup.) Gate vault. (2 beams.)

This is the same as the preceding exercise, except that no preliminary run is taken, the feet do not rest on the lower beam, and the beams are set higher. The exercise is done more deliberately and the arms are used to check the speed of the descent. With practice, the body and legs may be thrown up nearly to a vertical position before the downward swing. When the upper beam is raised, the height of the lower beam must be correspondingly increased. The distance between them should be adjusted to the age and height of the boys.

49. Back vaults.

These are vaults in which the body passes over the apparatus with the back turned towards it :—

(Sd.St.-Lg.B.) Oblique Back vault (Beam).

The beam is set at hip height, or a little lower at first. Stand with one side to the beam and with the inner leg carried backward. Reach forward and grasp the beam with the inner hand, swing the inner leg forward and upward, at the same time bending and springing with the standing leg, swing this leg up to the other and carry the body over the beam with the trunk inclined a little backward and the legs straightened out forward, and inclined a little upward; change the hands on the beam to allow the body to pass over it, then swing the legs down to land opposite the steadying hand. Fig. 177. At first it is easier to let the legs follow each other over the beam instead of bringing them together, and to land on the outside leg, allowing the other to swing backward to the Toe B. position. Fig. 178.

After a short practice at this, the ready position is taken with the feet together, and the vault is begun by taking a quick step forward with the outside foot. As the step is taken, the inner

hand reaches forward and grasps the beam, and then the inside leg is swung forward and upward, etc.

When the action of leaping with the outside leg has been thoroughly mastered from both sides, the start is made with a short run at a small angle to the beam. Later, the box or horse is used. The vault in each case is taken directly across the apparatus.

When precision has been acquired and the apparatus can be approached at a good speed, the body may be allowed to shoot forward diagonally across the apparatus. In making the leap the inside hand is placed on the near end of the box, while the steadying hand for the landing is placed on its farther end. These oblique vaults with a shoot forward can be taken from side to side of the beam from one end to the other, a step forward being taken for the start of each vault. Fig. 179.

In view of the greater breadth of the box or horse, it may be found desirable at first to take the vault only to a position sitting astride of the apparatus. Dismounting is then done to the farther side as follows: Swing the legs backward, then throw the weight of the body back onto the hands placed behind the seat, and at the same time swing the legs forward with sufficient force to lift the body and to carry it sideways clear of the apparatus.

Run. Back vault (Beam, box or horse crosswise).

The run is taken at right angles to the apparatus, and the leap and the beat of the hands are the same as in the Face vault [see Exercise 47 (e)]. As the hands beat down, the body is turned sharply so as to face one end of the apparatus and the legs are swung up towards that end, the hand in the way of the movement is lifted to allow the body to pass over the apparatus, and is placed down again and the other lifted as the body goes clear on the other side. The position of the body while over the apparatus and in landing is the same as in the Oblique vault. Fig. 180.

The exercise is introduced by vaulting to a sitting position astride of the apparatus and dismounting to the far side as described above.

50. Side vaults.

These are vaults in which the body swings to one side from the leap and passes over the apparatus in a horizontal position with one side turned towards it:—

Run. Sd. vault (2 beams).

The lower beam is placed just below hip height, the upper beam at nearly two arm-lengths above it. The run is made directly towards the beams, and as the leap is taken, one hand grasps the upper beam and the other is supported directly

below it on the lower beam. Then with a pull on the upper beam and a push on the lower, the body is lifted sideways, still facing forward, and as it swings beyond the beams and the legs begin to descend, the beams are let go and a landing is made with the back towards them. The body should be swung up between the beams as high as possible. Fig. 181.

Instead of letting go with both hands in the descent, the grasp of the lower hand can be retained and the body allowed to swing round and land sideways to the apparatus. Or the body, when between the beams, may be turned quickly towards the upper hand and the landing made with the other side towards the beam, the upper hand being shifted down to the lower beam to steady the body in landing.

Run. Sd. vault (1 beam or box).

The leap is made as for a Face vault, but the body is thrown up sideways and passes over the apparatus supported on one arm, and lands with the back turned towards it. The difficulty is to get the body high enough, and considerable leaping powers are required. Fig. 182.

51. Through vaults.

These are exercises in which the legs are passed through the space between the arms when the hands are placed on the apparatus. As the body has to pass directly forward over the apparatus, the leap needs to be made well away from it in order to allow time for the feet to be lifted high enough to clear the top ; in other respects the run-up and the leap are the same as for the Face and Back vaults. When using the pommelled horse or the beam saddle, as soon as the feet have been lifted clear above the top of the apparatus, the legs are extended forward between the arms and swung well up, carrying the body forward with them, then with a strong push from the arms the body as a whole is shot forward and lands clear of the apparatus. Fig. 183. Later, the vault may be taken over the box or horse without pommels. The legs cannot then be swung forward between the arms ; the hands beat and are lifted at once, feet are raised clear by bending the knees upward and outward.

Useful introductory exercises are as follows :—

(a) **(St.-F.Gr.) Thro. vault to St. posn. on apparatus. (Low beam with saddle).**

Grasp the pommels of the saddle at arm's length, leap as in taking the Bal. Sup. position (Exercise 43), but raise the knees and place the feet on the middle of the saddle, and stand up. Then jump forward.

The exercise can also be taken with a run, and the landing on the saddle used as the take-off for an immediate jump upward and forward, with or without arm swinging forward and upward, the whole body being strongly extended in the air.

(b) (St.-F.Gr.) Thro. vault to sit on apparatus. (Low beam with saddle).

As in (a), but pass the feet between the pommels and sit down on the saddle. Then swing the legs forward and at the same time push forward with the arms and land clear of the beam.

The following Through vault requires a rather different action, and is not suitable until the boys have gained skill and confidence in the preceding exercises :—

Run. Thro. vault with one leg leading.

This is taken at first on a beam saddle set low ; later, the beam may be raised or the horse with pommels used. Eventually, it may be attempted over the box or the horse without pommels.

The leap is made as for a clear jump over the saddle with one leg leading, but as soon as the shoulders are above the saddle the hands are placed on the pommels and the arms support the body for a moment while the rear leg is brought forward, then with both legs extended high forward the body is shot forward by a strong thrust of the arms. The performer passes over the apparatus with scarcely any check to his forward movement.

52. Changing seat on the horse or box.

In these exercises the seat on the box or horse is changed from Asd.Sit. to Sd.Sit. and vice versa, facing in the same or the opposite direction, or from Asd.Sit. to Asd.Sit. facing in the opposite direction. The changes are effected by swinging the legs either backward or forward. Whatever change or turn is to be made, the body is either thrown forward or backward on to the arms and at the same time the legs are swung backward or forward with sufficient force to lift the body off the apparatus so that the legs may be brought into position and the body turned, if necessary, for the new seat to be taken. Fig. 184.

A useful preliminary is to practise throwing the body up without changing the seat, and this also helps to cultivate style in dismounting after vaulting to a sitting position on the horse.

Note on Combined Exercises.—One kind of vault may be combined with another kind or with jumping or agility exercises, e.g. Running high jump onto a box followed by Heave vault on beam and over horse (Fig. 185) ; Running Through vault over a horse followed by Forward roll ; Running Astride vault over buck to Hi. St. on box (lengthw.) followed by Hand-spring (Fig. 186) ; Through vault over buck onto box (lengthw.), followed by Horizontal Astride vault over jumping rope and horse (lengthw.) (Fig. 187).



Fig. 153.



Fig. 154.



Fig. 155.

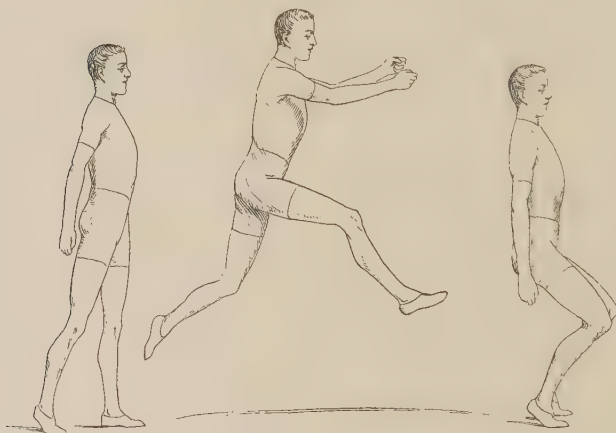


Fig. 156.

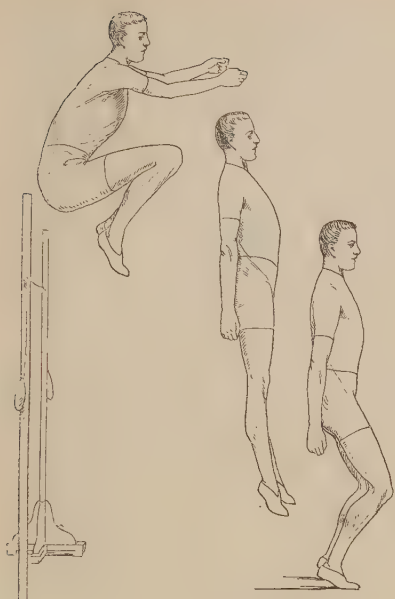


Fig. 157.



Fig. 158.



Fig. 159.

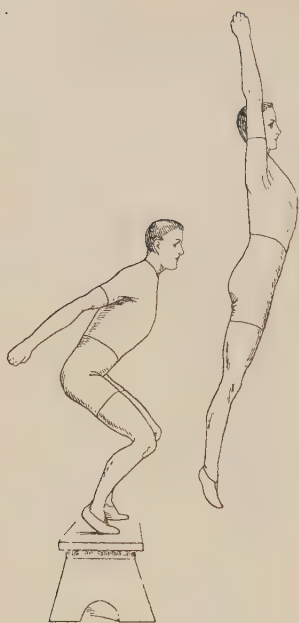


Fig. 160.

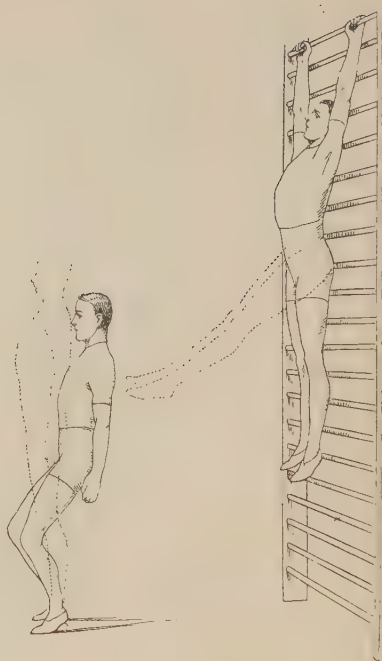


Fig. 161.

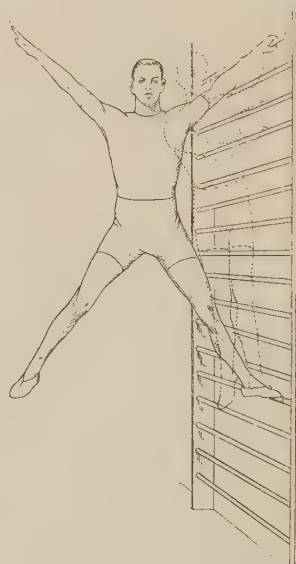
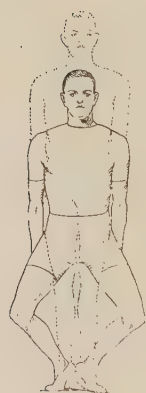


Fig. 162.

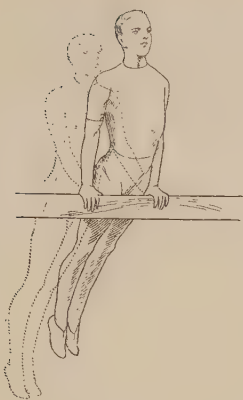


Fig. 163.

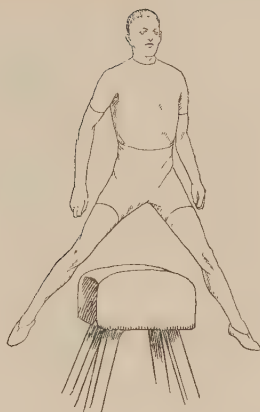


Fig. 164.



Fig. 165.



Fig. 166.

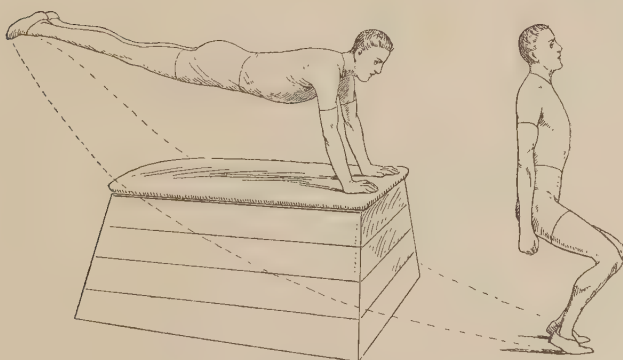


Fig. 167.

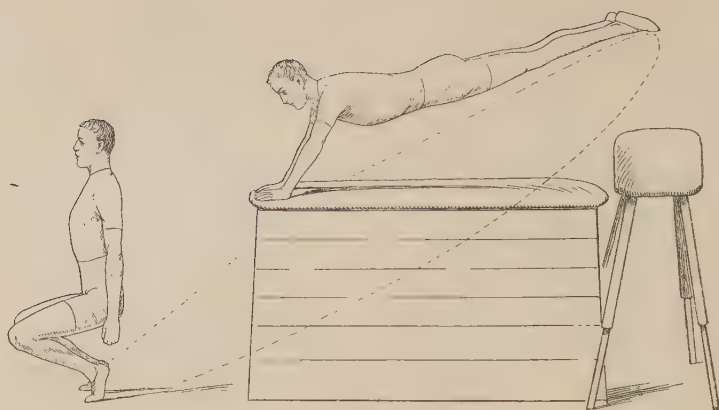


Fig. 168.

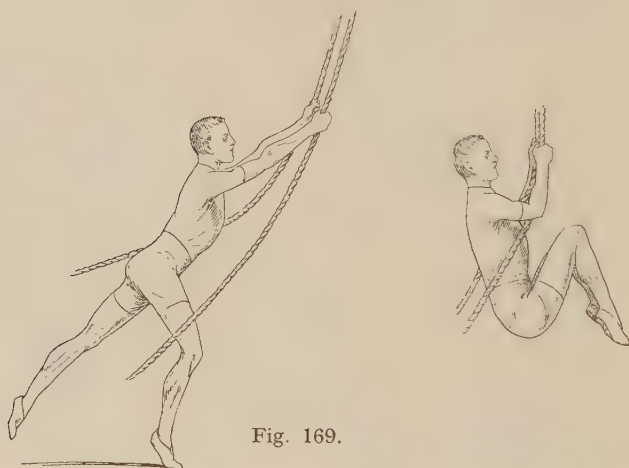


Fig. 169.

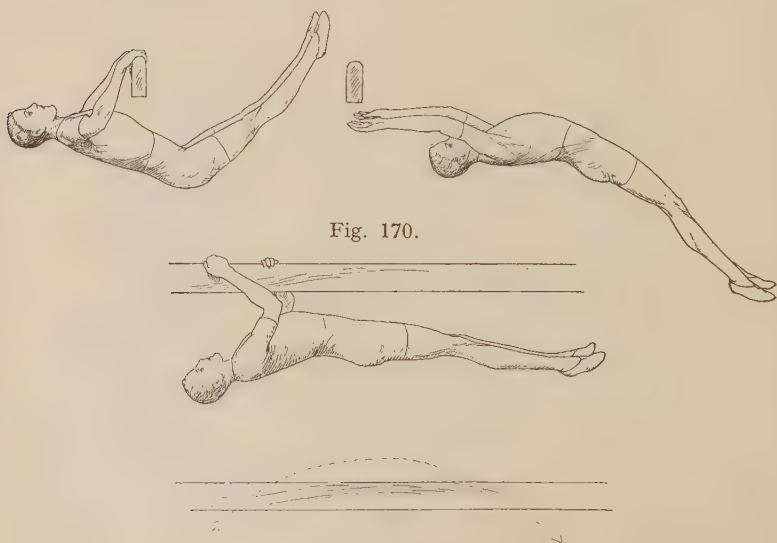


Fig. 170.

Fig. 171.

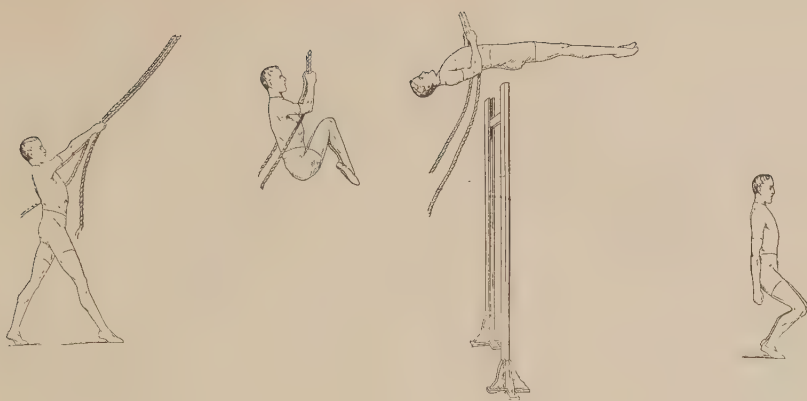


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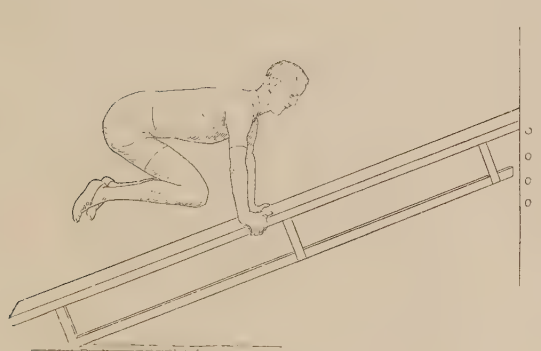


Fig 173.

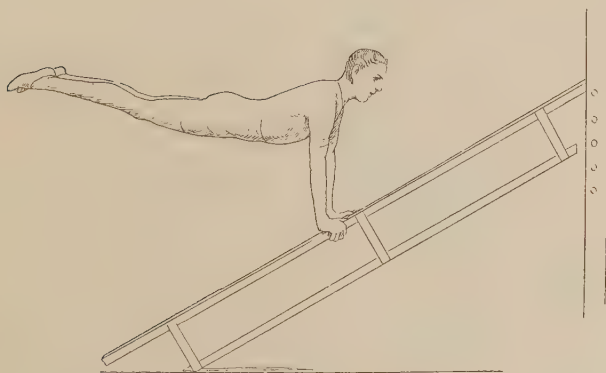


Fig. 174.

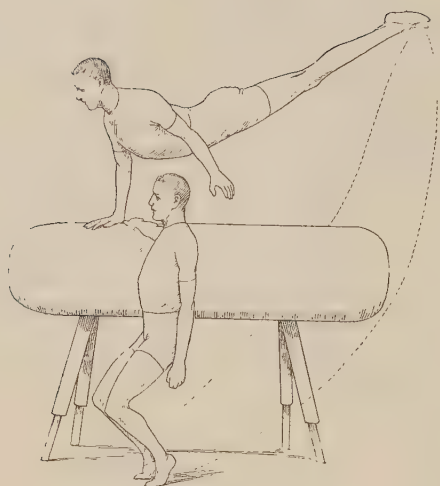


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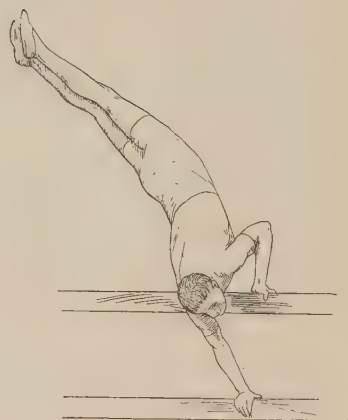


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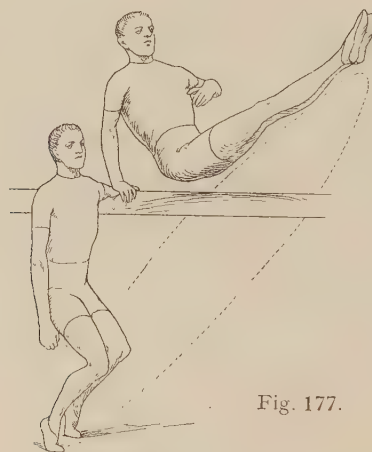


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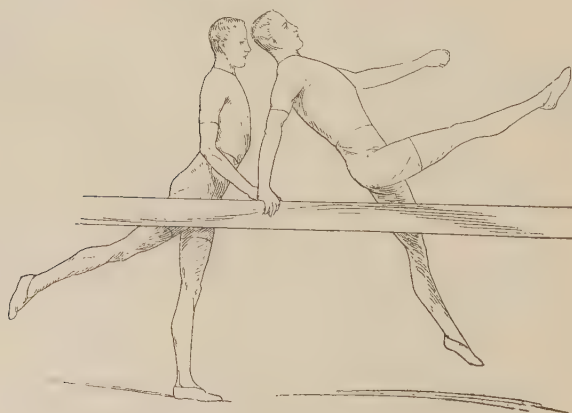


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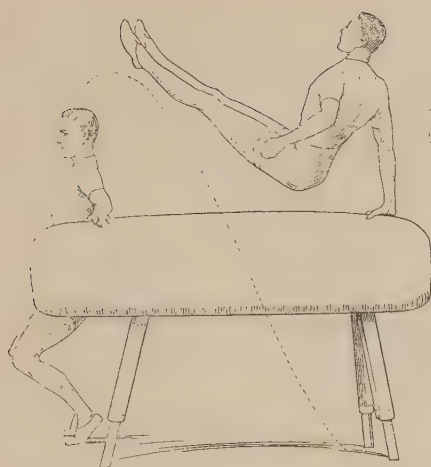


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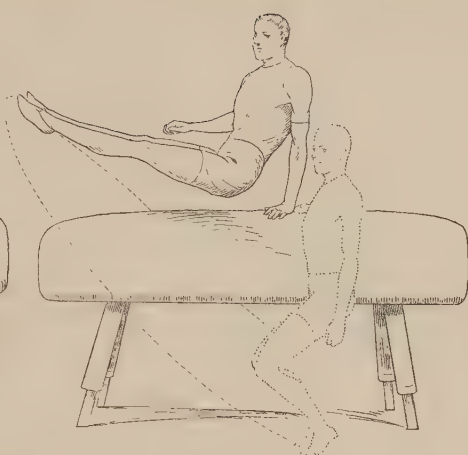


Fig. 180.

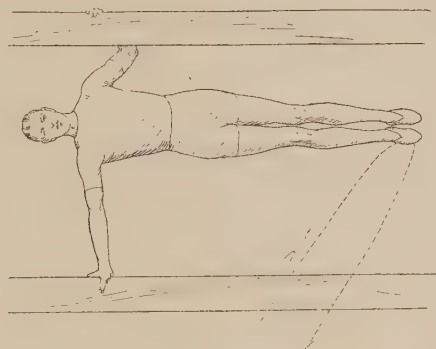


Fig. 181.

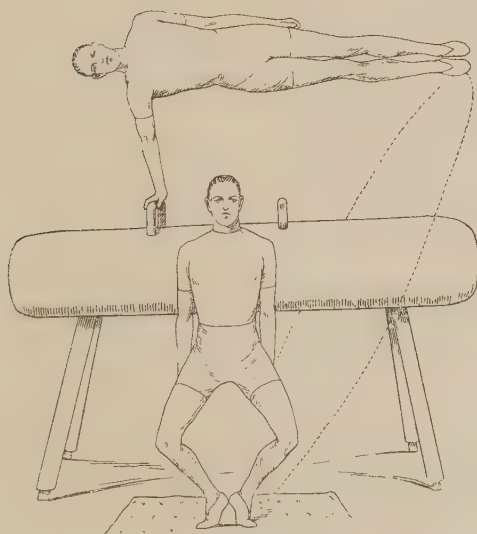


Fig. 182.



Fig. 183.

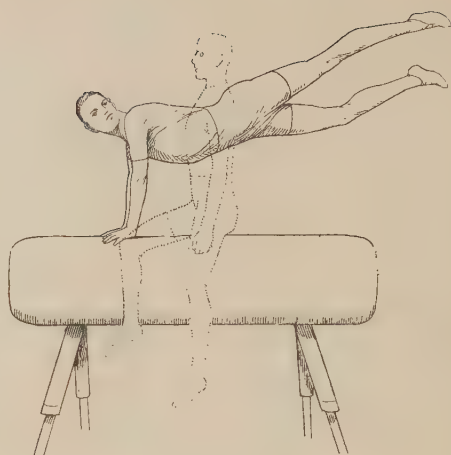


Fig. 184.

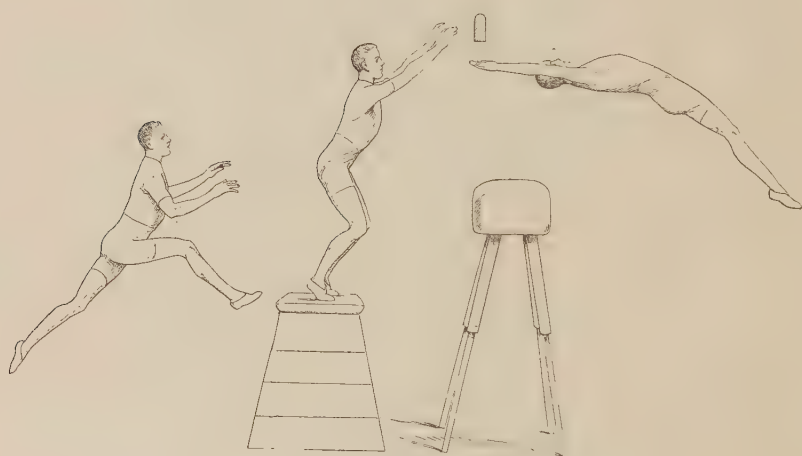


Fig. 185.

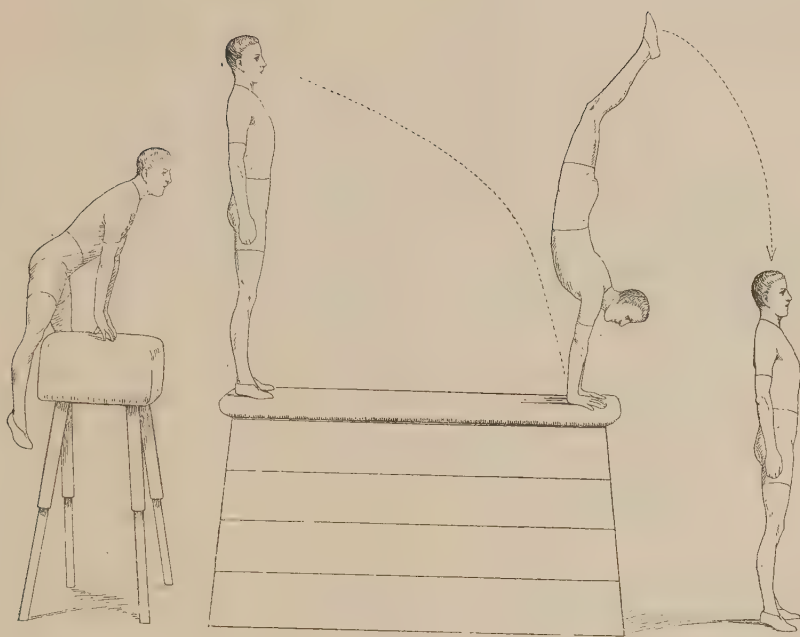


Fig. 186.

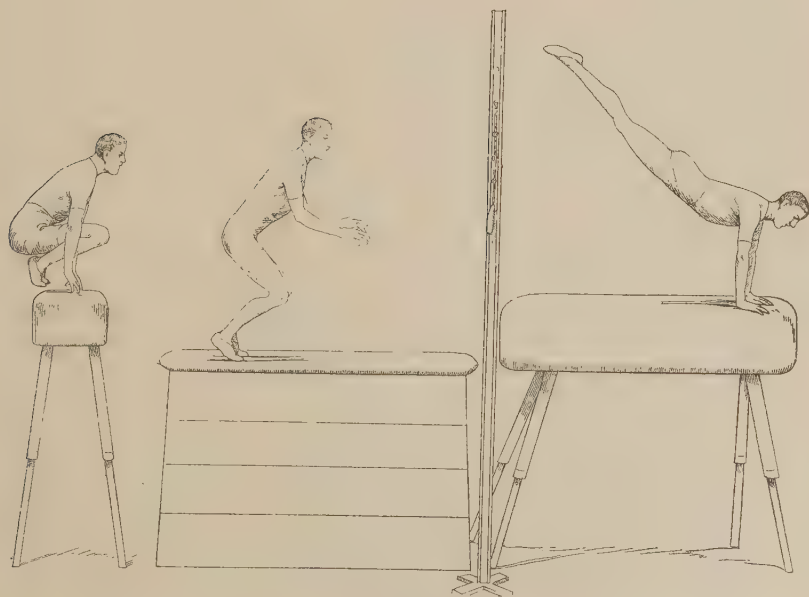


Fig. 187.
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CHAPTER XIV.

AGILITY EXERCISES.

The Agility Exercises are closely related to the Leaping Group, of which they may be said to form a section, but a section with such distinctive characteristics as to make it convenient to class them as a separate group. They require little or no apparatus and may be carried out on the gymnasium floor, or, if the surface is suitable and mats are provided, in the school playground.

The following types are comprised in the group :—

Forward and Backward Rolls.

Dives.

Head-standing and Hand-standing positions and movements in them.

Cartwheels.

Head, Hand and Back Springs.

They are for the most part lively, active movements, requiring much speed, control and co-ordination, and in many cases not a little daring; and they are further characterized by the wide distribution of the muscular efforts. They make a strong appeal to boys, and their judicious use may help considerably to encourage perseverance and a healthy spirit of emulation.

The Agility Exercises demand an intimate and complex co-operation between a large number of muscle groups, and their practice therefore tends to cultivate a high degree of skill and general bodily control, and to teach economy and grace of movement. For a successful performance, each muscle or group of muscles needs to be accurately controlled in relation to the sequence of action and the force and timing of other muscular contractions. And this is true not only of the muscles which are primarily responsible for producing the actual movement, but also and in equal measure of the muscles which steady and control, and which, though perhaps less actively employed, nevertheless play an essential part in achieving a complete and finished performance.

A simple agility exercise, such as a Forward Roll on the mat or floor, may be analysed to show the application of the foregoing principles.

Starting from the standing position, the movement begins with complete flexion of the hip, knee, and ankle joints and of the spine, the speed being regulated by the corresponding extensor muscles. The pupil is now in a position of readiness to tip the body-weight forward and perform the actual roll. This is effected by a quick extension of the ankle joints, thus transferring the weight momentarily on to the hands, which are placed on the mat a convenient distance in front of the feet. At this point the extensors of the elbows work hard to allow

the rolling to continue without an uncontrolled collapse of the whole body. As soon as the pupil touches the mat with the back of his head, the momentum which the body has derived from the initial movements, viz., the extension of the ankle joints and the forward and upward push with the hands, enables him to fall easily, in turn, on to the neck, back, hips and seat. Before the roll is actually completed, however, the flexors of the spine, hips and knees must contract, otherwise gravity would cause extension in these joints and the pupil would finish stretched out on his back. As soon as the feet touch the floor the work of the flexor muscles ceases and the pupil assumes the standing position by strong contraction of all the extensor muscles.

Thus it will be seen that even the simplest of the Agility Exercises provides a wide range of activity for the fundamental muscles, demanding complete contraction and extension of these massive muscle groups, accurate timing of the beginning and the cessation of the various muscular efforts, and control of the bodily momentum in a way that may best administer to the easy and effective performance of the movement.

The effects intended are even more strongly emphasized in the more difficult exercises, because additional factors are introduced, namely :—

- (i) Judgment of height and distance through which the body must be propelled, and the force and speed necessary for the propulsion (cf. Hand-spring) ;
- (ii) The best method of distributing the weight over the base of support (cf. Head-standing position : Head-spring) ;
- (iii) The deflection of momentum, and control of the poise of the body (cf. Hand-standing position), and
- (iv) Frequently, in addition, a very delicate sense of balance.

In such cases the pupil has not only to control the proper relationship of the various parts of the body to one another, but also of the body as a whole with reference to some external object or to a defined position in space.

Attention should be paid to securing adequate relaxation of muscles and limbs not immediately involved in any particular exercise or component part of an exercise, for any kind of local or general stiffness is a serious handicap in the effort to achieve good form and a polished performance in movements such as these, where suppleness and mobility are of paramount importance.

It is necessary that the master should exercise great care in teaching and supervising the movements, not only for the avoidance of possible accidents, but also to ensure at the outset that the pupils' efforts are directed on right lines. As in all complex muscular actions, faults once established are difficult to eradicate and set a limit to progress. On the other hand, early youth when all is still plastic, is the time when such activities can be most easily learnt.

1. Forward Roll.

This can be taken on the bare floor, mat, top section of box (lengthw.), etc.

The exercise is best taught from the crouch position, but with the arms on the outer sides of the knees and the head dropped well forward. A quick extension of the ankle joints tips the weight of the body forward on to the hands, which push off from the ground in a forward and upward direction. The head is tucked in so that only the back of it comes into contact with the mat. The roll, thus begun, is continued by allowing the neck, shoulders, back and hips to take part in the movement. The legs should be crossed so that they may be kept close to the body, thus allowing the momentum easily to bring the feet to the floor again. A quick stretching of the legs and body now brings the pupil to the standing position.

The exercise may also be taken from the standing position, in which case the pupil passes without pause through the crouch position described above. Later, two consecutive forward rolls can be carried out. The legs should be kept crossed throughout. When the boys have become accustomed to this, they may be encouraged to make as many forward rolls as possible in a given distance, e.g. on three mats placed end to end.

A short preparatory run can be taken and this gives sufficient speed in the roll to allow the performer to spring up to the standing position without any break in the movement, or with still greater pace to spring up and run on.

2. Backward roll.

This may at first be taken from the Hz.Sit.-Kn.Ra.Op. position with the hands held palms upwards above the shoulders. The feet are lifted from the floor, the body tipped backward, and the hands, with fingers pointing forward, placed on the ground beyond the shoulders at each side of the head. Fig. 188. The back, which should be rounded, strikes the mat first, and the performer continues to roll backward on to the shoulders and back of head. The knees are kept bent, and strong pressure is exerted with the hands in the last part of the movement. This pressure helps considerably in performing the most difficult part of the exercise and in preventing the weight of the body from bearing too heavily on the head.

The exercise may also be taken from the St.-Kn.Fl.Bd. position, and later from the St. position.

3. Hand-standing.

The position (Fig. 189) is led up to by various introductory exercises. The first of these is (**Bt.Fr.Sup.**) **Lg. kick. u.** (see Abdominal Exercises 5 and 52). The Hand-standing position is then taken, with another boy to help the performer to reach and hold it.

The performer advances one foot, stoops forward, bending the advanced knee well, carries the other leg backward, and places his

hands on the ground at least shoulder-width apart. The assistant standing facing the performer, places one knee slightly bent against his shoulder and grasps his belt or holds him round the hips. Fig. 190. The performer then throws his legs up to the Hand-standing position, with necessary help from the assistant. In the Hand-standing position the head must be pressed backward as far as possible.

The next step is to take the position with the feet resting against the wall bars, at first with the help of two other boys, and later without assistance. Stand facing and about two paces from the bars, advance one foot and rest the toes on the ground, raise the arms forward with the palms of the hands downward; then swing the body down quickly and as the hands touch the ground, throw up the rear leg followed by the other. As the performer's hands come to the ground, the assistants, one on each side and kneeling on one knee, place the hand nearest to the bars under the performer's shoulder and the other hand against the front of his thigh. Fig. 191.

Walking on the hands can now be attempted, and at first should be taken in the form of free practice. If the balance is lost, a fall on to the back can be avoided by turning the body to the left or right by moving one hand forward in a curve towards the other. The performer can be steadied in the Hand-standing position by another boy while he practises this turn.

A much more difficult way of taking the Hand-standing position and one that needs considerable command of balance is to throw the legs up together. The balance may first be taken on the hands with the thighs and knees fully bent, and then the legs straightened upwards.

Arms bending and stretching may be carried out in the Hand-standing position. The elbows are bent outward, and to allow of this the hands are placed on the ground with the fingers pointing diagonally inwards.

The Hand-standing position may be followed by a forward roll. After the balance has been held for a short time, the arms are quickly bent, the head brought forward, the legs bent and crossed, and the roll is completed.

The Hand-standing position can be taken from a backward roll. Begin the roll as described above, but as soon as the weight of the body has been taken by the head and shoulders, stretch the arms, carry the head back and extend the hip joints, and press up to the Hand-standing position.

In the following exercises Hand-standing is used as an intermediate position :—

(Knee hanging) Swing down through Hn. St. posn. (Ladder, later beam).

The apparatus is set at such a height that the performer when hanging from it by the knees, can place his hands on the ground with straight arms.

Sit on the apparatus with the hands grasping it, slip backward until the knees are crooked over it, take the hands off it and lower the body until the hands rest on the floor immediately under it. Then bend the hips and knees and land on the feet. The teacher should be in position to give support if needed.

(Hi.Bk.Ly.) Swing down through Hn. St. posn. (Beam with saddle).

The beam is placed so that the top of the saddle is at about waist height. Lie balanced across the saddle on the small of the back, bend the head and trunk backwards, reaching down with the arms under the beam, and let the body slip off the saddle until the hands rest on the floor immediately under the beam, then bend the hips and knees and land on the feet. Another boy should be in position to give support if needed.

4. Hand-spring.

In this exercise the body is thrown up quickly as for Hand-standing but with the arms slightly bent, and the movement is continued, the body falling backward until, with a push from the arms, it lands again upright on the feet. The exercise can be taken either from the St. position or with a run.

Standing Hand-spring from low box.

The starting position and the first part of the movement are the same as for hand-standing against the wall bars (see Exercise 3), except that the swing up of the legs is quick and more vigorous. When the swing has carried the legs beyond the vertical, the hands push off strongly from the apparatus so as to throw the body upward and forward and allow the performer to land in balance on the feet. He should land with the feet a little apart and with the knees slightly bent, and come to the erect standing position with a little jump. Fig. 192.

In this exercise it is essential to guard against lowering the head or rounding the back ; the back must be kept well stretched and the head pressed backward.

A useful introductory exercise, known as " Kicking horses," is as follows :—From the standing position drop quickly on to the hands and kick both feet vigorously backward and upward just as, or just before, the hands touch the floor. " See who can kick the highest ! " Throw the head back as the hands come down.

Running Hand-spring.

The various methods of carrying out this exercise are introduced in the following order :—

(a) *Over a back.* The supporter who gives the " back " takes the Hz.Knl. position, with his back well hollowed. The performer takes a short run, places his hands on the ground beside the supporter (not under him) with his arms straight and the back of his shoulders against the supporter's side, throws up his legs, and swings over until his back is lying across that of the supporter, and so up to the St. position. Fig. 193.

(b) *Over high backs.* Two supporters stand back to back with their trunks bent forward ; a third, kneeling at one side, places his head between the knees of the two others and his arms round their knees. The performer runs up to the back of the kneeling supporter, places his hands on it, and takes a hand-spring over the backs of the other two as in (a).

(c) *From the pad of the vaulting horse.* The action is similar to that from the standing position, but a run is taken and the legs are thrown up by a spring off one foot.

(d) *From a supporter's knees.* The supporter lies on his back with knees up and feet firmly planted on the ground. The performer, facing the supporter's feet, takes an easy run, places his hands on the supporter's knees and takes a hand-spring. The supporter raises his hands, palms upward, so that the performer's back strikes them as he comes over, and this is easily sufficient to bring the performer to his feet. Fig. 194.

(e) *On a mat.* This requires considerably more quickness of action than when the hands are placed on a support above the level of the ground.

(f) *Throwing both legs up together.* This is a much harder form of (e). The difficulty is to prevent excessive bending of the elbows.

5. Head-standing position.

This is taken on a mat, and at first with the legs supported against a wall. Later, another boy can steady the legs, and later still the position is taken without any assistance.

Place the hands on the ground at least shoulder-width apart, with the fingers pointing straight forward or slightly outward ; then place the top of the head on the ground with the forehead about 3 inches in front of the line joining the tips of the fingers. Care should be taken to get these details correct because they are important for securing a firm base of support. Then, by pushing with the hands and drawing the feet along the ground, raise the seat until it is above the head, and then gradually raise the legs until they are in line with the trunk in approximately a vertical position. It is easier at first to raise one leg at a time.

To descend from the head-standing position, lower the legs slowly to the ground, or relax and bend the head forward and do a forward roll.

6. Head-spring.

The starting position for this exercise is the same as for taking the Head-standing position, i.e. with the head resting just in front of the hands, the hip-joints fully bent, and the legs straight with the toes on the ground. The weight is then transferred entirely to the head and hands, and the elbows are gradually extended until the body begins to fall backward. Just as the balance is about to be lost, the legs, which till now have been kept close to the body, are quickly

swung in an upward—forward—downward direction. This swing, combined with a strong push off with the hands in the last part of it, projects the body feet first into the air, and for a moment strongly arched. Then a quick forward flexion of the trunk turns the body sufficiently to allow the performer to alight on the feet on the mat with knees slightly bent and the feet a little apart. He then takes a small jump upward and resumes the erect position. Fig. 195.

The chief points to observe in this exercise are as follows :—

(i) The starting position must be correct, the legs being kept as close as possible to the body until the swing is begun.

(ii) The body must be on the point of falling backward before the swing begins.

(iii) The swing should be as forcible as possible.

(iv) The legs must be kept straight in the swing.

(v) The push off with the hands must be accurately timed.

The difficulty of the exercise is decreased by taking off from an apparatus raised a little above the mat on which the landing is made, because then the movements have not to be so vigorous. The exercise is therefore taught first from the end of a vaulting box at knee height. Later, the height of the box is decreased, then the exercise is taken from the top of the vaulting horse pad, and finally on the mat. The exercise can then be taken on the mat with a running start (and taking off with *both* feet), and with practice two or more consecutive head-springs can be made.

7. Back-spring.

This exercise may be started from the Bk.Ly.—Hi.Lg.Ra. position with the hands resting either on the floor at each side of the head or on the thighs. The performer rolls backward until he rests mainly on the shoulders and neck with the legs extended. From this position, by means of a vigorous backward swing of the legs, combined with pressure from the hands and a strong push off with the head, he swings himself on to his feet and hands with knees fully bent. Fig. 196.

The exercise may also be taken from the standing position, in which case the performer first of all falls backward to the mat with the trunk and arms thrown forward as a counter-weight to lessen the bump. As soon as the seat comes in contact with the mat, he continues the movement backward by rolling lightly on to the back, shoulders and head with the legs raised, and then immediately makes the back-spring. The knees must not be bent during the falling and rolling backward.

8. Hand-spring, Head-spring and Back-spring combined.

These are performed on the mat in a continuous movement : on landing from the hand-spring by swinging the body forward for the head-spring, and on landing from the head-spring by falling back for the back-spring.

9. Dives.

These are similar to Forward Rolls performed with great rapidity after alighting from a dive through the air. A spring is made from both feet, as in vaulting, and a dive head first is taken over an apparatus on to a mat.

Practice first over a low rope and with a standing start. Spring up and over the rope, landing on the mat first with the knuckles of the clenched fists (backs of the hands turned forward and arms nearly straight), let the arms yield to absorb the shock and at the same time drop the head forward and round the back ; roll forward and come up on to the feet with only a glancing impact of the body with the mat. The body should be extended during its passage through the air.

Progress is made by taking a preliminary run and diving over a higher rope, a section of the box, a bench, or the back of another boy.

10. Cartwheels.

(a) **Introductions to Cartwheel.** Stand with feet slightly apart, place the left hand on the floor about 12 inches in front of the left foot, bending the knees, especially the left. Hold the right hand in readiness to be placed on the floor in line with the left hand and left foot. At the word *Go!* throw a little of the weight of the body on to the hands and carry the feet over (right foot leading and reaching the floor first) until they land in a position approximately parallel to their former position but facing the other way. Practice to the right in a similar manner. There should at first be no attempt to lift the feet more than a few inches from the ground. With practice, the feet are raised higher.

The next stage is to place the hands more to the outside of the left (or right) foot and to get a freer swing of the body. Gradually the hands are placed in line with the feet and the Cartwheel is performed in correct style, i.e. directly sideways, with a vigorous swing of the body, the head back, the legs kept apart and swinging vertically over the head. Fig. 197.

Cartwheeling should be carried out at first as a free exercise ; later, the boys may be directed to turn along a line, e.g. along one floor-board ; later still, the boys, formed in open files may turn cartwheels to left or right together at command.

A more difficult form of the exercise is to bring the legs together when they are over the head. The wheel is made at a rather slower pace, so that when the body is vertical it almost stops in hand-standing position. As it passes this point the leading leg is dropped sideways ready for landing.

11. "Spin the man."

The boys in groups of three. Two stand facing each other with feet astride and grasp left arm to right arm (on one side only) close

up to the shoulders. The third, the performer, with under-grasp on the linked arms, takes the Hv.B.Hg. position with his legs between the two supporters. The supporters then pass their free arms under the performer's back and grasp each other's wrists. To effect the spin, the performer lifts his knees as in circling and the other two spin him quickly over their linked arms, on which he must retain his grasp, until he is standing again on the ground. The supporters' arms which do the spinning should be shifted up to a position behind the performer's neck as he comes over, in case his feet slip forward in landing.



Fig. 188.



Fig. 189.

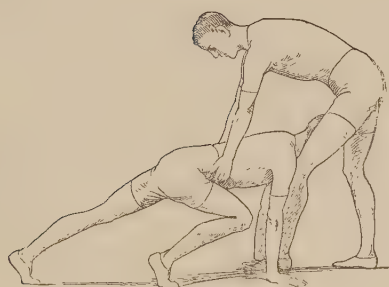


Fig. 190.

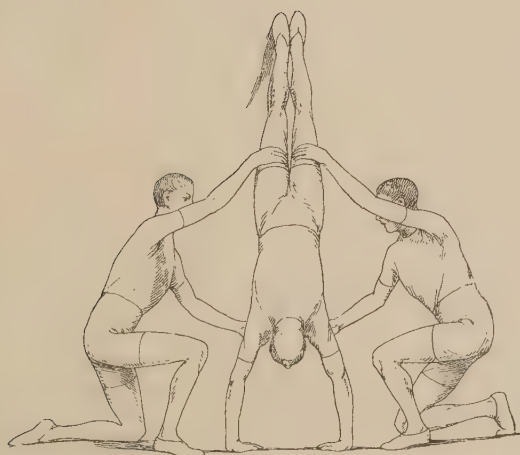


Fig. 191.

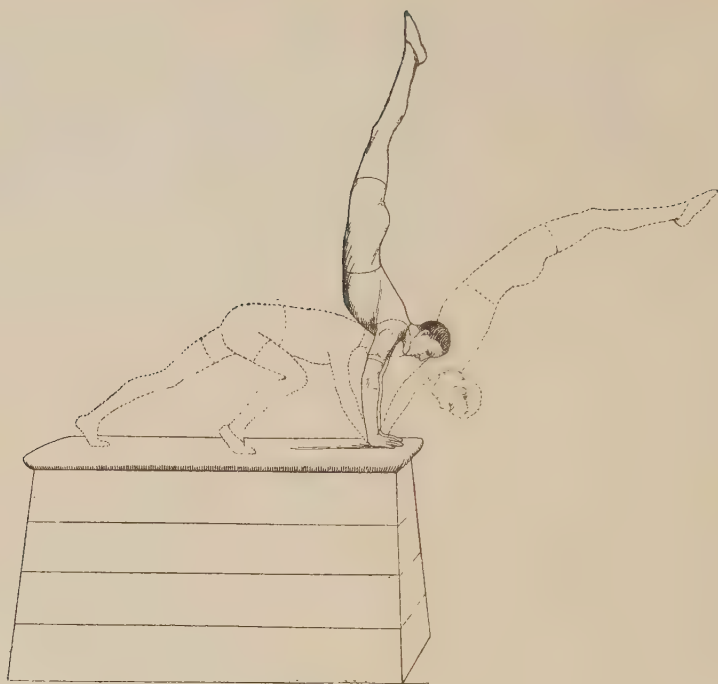


Fig. 192.



Fig. 193.

Fig. 194.

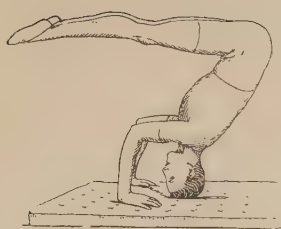


Fig. 195.

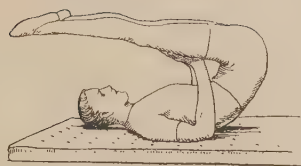


Fig. 196.



Fig. 197.

PART III

PROGRESSIVE LISTS OF EXERCISES
for boys who begin their physical training between
the ages of 8 and 11, and for those over 11 who
have followed the ordinary elementary school
course up to that age (boys in Secondary Schools,
Central or Senior Elementary Schools, etc.)

NOTE.—The numbers in italics on the right of the serial
numbers refer to the paragraphs of Part II where
the descriptions of the exercises are given.

ORDER MOVEMENTS.

FIRST YEAR (AGE 9).

- 1- 6. Forming files on leaders (previously placed on marks at first).
- 2- 1. Attention and Stand at ease.
- 3- 7. Covering in files.
- 4- 2. Turning to r. & l. with a jump.
- 5- 4. Moving to r. & l. with a jump.
- 6- 2. Turning about with a jump.

SECOND YEAR (AGE 10).

- 7- 8. Forming 2 files from 4 files, and vice versa.
- 8-10. Forming ranks on leaders (previously placed at first).
- 9-11. Dressing in ranks.
- 10- 5. One step f., b. & s. (T.C., later C.C.).
- 11- 5. Two steps f., b. & s. (T.C., later C.C.).

THIRD YEAR (AGE 11).

- 12- 3. Turning to r. & l. on heel and toe. (T.C., later C.C.).
- 13- 9. Reversing files.
- 14-12. Extending ranks.

FOURTH YEAR (AGE 12).

- 15- 3. Turning about on heel and toe.

LEG EXERCISES.

TYPES.

- I. Game forms.
- II. Feet closing and opening.
- III. Toe placing.
- IV. Foot placing :—
 - (i) astride.
 - (ii) sideways (and heel raising and knee bending).
 - (iii) forward (and heel raising).
- V. Lunging.
- VI. Heel raising and knee bending :—
 - (i) Heel raising.
 - (ii) Heel raising and knee bending.

I. GAME FORMS.

FIRST YEAR (AGE 9).

- 1-26. As small as possible, as tall as possible.
- 2-27. Sit down cross-legged and spring up to attention.
- 3-13. Warlike lunge outward.
- 4-28. (St.) Skip jump, at whistle jump to Crh. posn., then change to hands on knees.
- 5-29. (St.-Asd.-Hn.Hp.) Skip jump, at whistle jump to Kn. fl. bd.

II. FEET CLOSING AND OPENING.

FIRST YEAR (AGE 9.)

- 6- 1. (St.) Ft. clos. & open. (later T.C. to 10 or 11).
- 7- 1. (St.) Ft. clos. & open. (C.C. to 10 or 11).
- 8- 1. (St.) Ft. clos. & open. rhyth.
- 9- 1. (St.) Ft. clos. & open. with Am. bend. u. (1-2, later T.C. [C.C.] to 10 or 11).

SECOND YEAR (AGE 10).

- 10- 1. (St.) Ft. clos. & open. with Am. bend. ac. (later T.C. [C.C.] to 10 or 11).

THIRD YEAR (AGE 11).

- 11- 1. (St.) Ft. clos. & open. with Hd. rst. (later T.C. [C.C.] to 10 or 11).

FOURTH YEAR (AGE 12).

- 12- 1. (St.-Ft.Cl.-U.Bd.) Ft. open. & clos. with Am. stretch. s. (T.C., later rhyth.).

FIFTH YEAR (AGE 13).

- 13- 2. (St.) Ft. clos. & Hl. rais., Ft. open. & Hl. rais. (1-3, 1-3. Later : 1-6).

LEG EXERCISES.

III. TOE PLACING.

FIRST YEAR (AGE 9).

- 14- 3. (St.) Toe plac. f. (later tapping toe on ground).
- 15- 3. (St.) Toe plac. s. (later tapping toe on ground).

SECOND YEAR (AGE 10).

- 16- 3. (St.) Toe plac. b.
- 17- 3. (St.) Toe plac. f. with Hd. rst.

SIXTH YEAR (AGE 14).

- 18- 3. (St.) Toe plac. s. with Am. rais. s.
- 19- 3. (St.) Toe plac. f. with Am. rais. s.

SEVENTH YEAR (AGE 15).

- 20- 3. (St.) Toe plac. s. with Am. rais. s. & u.
- 21- 3. (St.) Toe plac. f. with Am. rais. s. & u.

IV. FOOT PLACING.

(i) *Foot Placing Astride.*

FIRST YEAR (AGE 9).

- 22- 4. (St.) Ft. plac. asd. with jump.
- 23- 4. (St.) Ft. plac. asd. with jump, with Am. swing. s.
- 24- 4. (St.) Ft. plac. asd. with jump, with Am. swing. s. & u.

SECOND YEAR (AGE 10).

- 25- 5. (St.) Ft. plac. asd. in 2 moves. (1-2, later T.C. [C.C.]).
- 26- 5. (St.) Ft. plac. asd. with Hn. on hips in 2 moves.
- 27- 5. (St.) Ft. plac. asd. with Am. bend. u. in 2 moves.
- 28- 5. (St.) Ft. plac. asd. with Am. bend. ac.
- 29- 5. (St.) Ft. plac. asd. with Am. swing. s.
- 30- 5. (St.) Ft. plac. asd. with Hd. rst.

THIRD YEAR (AGE 11).

- 31- 5. (St.) Ft. plac. asd. with Am. stretch. m. (1-2, later T.C. [C.C.]).
- 32- 5. (St.) Ft. plac. asd. with Am. stretch. u.

(ii) *Foot Placing Sideways (with Heel Raising and Knee Bending).*

SECOND YEAR (AGE 10).

- 33- 6. (St.) Ft. plac. s. (later 1-2 T.C. [C.C.]; later still 1-4 T.C. [C.C.]).
- 34- 7. (St.) Ft. plac. s. with Am. bend. u. (later 1-2 T.C. [C.C.]; later still 1-4 T.C. [C.C.]).

THIRD YEAR (AGE 11).

- 35- 7. (St.-U.Bd.) Ft. plac. s. with Am. stretch. m. (1-2, later 1-4 T.C.).
 36- 8. (St.-Hn.Hp.) Ft. plac. s. & Hl. rais. (1-4, later T.C.).
 37- 8. (St. Hn.Hp.) Ft. plac. s. & Hl. rais. (1-8 T.C.).
 38- 8. (St.-Hn.Hp.) Ft. plac. s. & Hl. rais. & Kn. bend. (1-6, later T.C.).
 39- 7. (St.-U.Bd.) Ft. plac. s. with Am. stretch. u. (1-4 T.C.).

FOURTH YEAR (AGE 12).

- 40- 7. (St.) Ft. plac. s. with Am. swing. s. & u. (1-4, later T.C.).
 41- 8. (St.-Hn.Hp.) Ft. plac. s. & Hl. rais. & Kn. bend. (1-12 T.C.).

FIFTH YEAR (AGE 13).

- 42- 9. (St.) Ft. plac. s. & Hl. rais., with Am. stretch. u. & d. (1-4 T.C., later 1-8 T.C.).
 43- 7. (St.-Am.U.) Ft. plac. s. with Am. part.
 44-10. (St.-Low Hn.Hp.) Ft. plac. wide s. (1-2, later 1-4 T.C.).

SIXTH YEAR (AGE 14).

- 45- 9. (St.) Ft. plac. s. & Hl. rais. & Kn. bend., with Am. stretch. u. & part.
 46- 9. (St.) Ft. plac. s. & Hl. rais. & Kn. bend., with Am. rais. s., Hn. turn., & Am. rais. u. (1-6, later T.C.).
 47-11. (St.-Wd.Asd.-1 Kn.Bd.-Low Hn.Hp.) Rhyth. Take-off.
 48-11. (St.-Wd.Asd.-1 Kn.Bd.-Ac.Bd.) Rhyth. Take-off with Am. fling.

SEVENTH YEAR (AGE 15).

- 49-11. (St.-Wd.Asd.-1 Kn.Bd.-U.Bd.) Rhyth. Take-off with Am. stretch. s. (u.).
 50- 9. (St.) Ft. plac. s. & Hl. rais. & Kn. bend, with Am. stretch. u. s. & d. (1-6, later T.C.).

(iii) *Foot Placing Forward.*

THIRD YEAR (AGE 10).

- 51-12. (St.) Ft. plac. f. (later 1-2 T.C. [C.C.], later still 1-4 T.C. [C.C.]).

FOURTH YEAR (AGE 11).

- 52-12. (St.-Ac.Bd.) Ft. plac. f. with Am. fling. (1-4, later T.C.).

FIFTH YEAR (AGE 13).

- 53-12. (St.-U.Bd.) Ft. plac. f. with Am. stretch. u. (1-4 T.C.).

SIXTH YEAR (AGE 14).

- 54-12. (St.) Ft. plac. f. and Hl. rais. with Am. stretch. u. & d. (1-4 T.C., later 1-8 T.C.).

LEG EXERCISES.

V. LUNGING.

FIFTH YEAR (AGE 13).

- 55-14. (St.-Ft.Fl.Op.-Hn.Hp.) Lung. o. in 3 counts.
56-15. (St.-Ft.Fl.Op.-Hn.Hp.) Lung. o. with toe pointing.
57-16. (St.-Ft.Fl.Op.-Hn.Hp.) Lung. o.

SIXTH YEAR (AGE 14).

- 58-18. (St.-Ln.O.-U.Bd.) Hd. rst. & Am. bend. u.

SEVENTH YEAR (AGE 15).

- 59-20. (St.-Hn.Hp.) Toe lung. b.

EIGHTH YEAR (AGE 16).

- 60-17. (St.-Ft.Fl.Op.-Hn.Hp.) Moving f. by lung. o. in zig-zag.

NINTH YEAR (AGE 17).

- 61-19. (St.-Ln.O.-Hn.Hp.) Front Hl. rais.

VI. HEEL RAISING AND KNEE BENDING.

(i) *Heel Raising.*

FIRST YEAR (AGE 9).

- 62-21. (St. [-Ft.Cl.]) Hl. rais. (later T.C. to 10).
63-21. (St. [-Ft.Cl.]) Hl. rais. (C.C. to 10).
64-21. (St.) Hl. rais. (C.C. to 11).
65-21. (St.-Asd.-Hn.Hp.) Hl. rais.

SECOND YEAR (AGE 10).

- 66-22. (St.-Hl.Ra.) Hd. turn.
67-23. (St.) Quick Hl. rais. & lower. with free Am. circl. (single circles at first).

THIRD YEAR (AGE 11).

- 68-23. (St.-Rvs.Am.S.) Hl. rais. with Am. rais. u.
69-23. (St.-U.Bd.) Quick Hl. rais. with Am. stretch. u.
70-23. (St.-U.Bd.) Hl. rais. with Am. stretch. u. and s.

FOURTH YEAR (AGE 12).

- 71-23. (St.) Hl. rais. with Am. rais. s. & u.
72-23. (St.) Quick Hl. rais. & lower. with Am. swing. s. & u., s. & d.
73-23. (St.) Hl. rais. with Am. stretch. u. & d.

FIFTH YEAR (AGE 13).

- 74-23. (St.-Asd.-Rvs.Am.S.) Hl. rais. with Am. rais. u.
75-24. (St.-Ft.F.-U.Bd.) Hl. rais., later with Am. stretch. u.
76-24. (St.-Ft.F.-Am.U.) Hl. rais.

LEG EXERCISES.

SIXTH YEAR (AGE 14).

- 77-22. (St.) Hl. rais. & Hd. turn. (1-5).
78-23. (St.-U.Bd.) Slow Hl. rais. with Am. stretch. u. & quick Hl. lower. with Am. bend.

SEVENTH YEAR (AGE 15).

- 79-23. (St.) Hl. rais. with Am. circl.

EIGHTH YEAR (AGE 16).

- 80-25. (St.-Hl.Ra.) Quick Hl. lower. & rais. (one movement, without noise). (Later, rhyth. 1-10.)

(ii) *Heel Raising and Knee Bending.*

FIRST YEAR (AGE 9).

- 81-30. (Fr.St.[St.]-F.Gr.) Hl. rais. *with* Kn. fl. bend. (quick & moderate). (Wall bars).
82-29. (Fr.St.-F.Gr.) Hl. rais. & Kn. fl. bend. (later, quick Kn. fl. bend. & stretch). (Wall bars).
83-29. (St.) Hl. rais. & Kn. fl. bend. (hands behind thighs, body erect).
84-30. (St.) Hl. rais. *with* Kn. bend. (also with grasp, quick & slow).
85-31. (St.) Hl. rais. & Kn. bend.
86-31. (St.-Hl.Ra.) Quick Kn. bend. with Am. swing. s.
87-30. (Fr.St.-Asd.-F.Gr.) Hl. rais. *with* Kn. bend. (quick & slow). (Wall bars).
88-30. (St.-Asd.-Hn.Hp.) Hl. rais. *with* Kn. bend (later rhyth).
89-31.—(St.-Hl.Ra.) Quick Kn. fl. bend. with Am. swing. s.
90-34. (St.-Kn.Bd.-Hn.Hp.) Skip jump, at whistle jump to Kn. fl. bd. posn.

SECOND YEAR (AGE 10).

- 91-31. (St.-Hl.Ra.) Quick Kn. fl. bend. & stretch.
92-32. (St.-Kn.Bd.) Am. bend. u.
93-31. (St.-Hl.Ra.) Slow Kn. bend. with Am. rais. s.
94-31. (St.) Hl. rais. & Kn. fl. bend. (good form).
95-30. (St.-Rvs.Am.S.) Hl. rais. *with* Kn. bend., & with Am. rais. u.
96-32. (St.-Kn.Bd.) Hd. turn.
97-31. (St.-U.Bd.) Hl. rais. & Kn. fl. bend.
98-30. (St.) Hl. rais. *with* Kn. bend. rhyth.
99-32. (St.-Kn.Fl.Bd.) Quick Hd. turn.
100-31. (St.-Hl.Ra.-U.Bd.) Kn. bend. with slow Am. stretch. s.
101-31. (St.) Quick Hl. rais., Kn. bend., Kn. fl. bend., Kn. stretch., Hl. lower (1-5).
102-31. (St.-Hl.Ra.) Slow Kn. fl. bend. & stretch.

LEG EXERCISES.

- 103-31. (St.-Hn.Hp.) Hl. rais. & Kn. bend., with Am. bend. u. & stretch. d.
 104-35. (St.-Hl.Ra.) Kn. fl. bend. with a jump.
 105-31. (St.-Kn.Fl.Bd.-Rvs.Am.S.) Quick Kn. stretch. with Am. swing. u.

THIRD YEAR (AGE 11).

- 106-30. (St.) Hl. rais. *with* Kn. bend. & with Am. rais. s. & u.
 107-32. (St.-Kn.Fl.Bd.-U.Bd.) Am. stretch. s. (m.).
 108-30. (St.) Quick Hl. rais. *with* Kn. bend. & with Am. swing. s. & u. rhyth.
 109-31. (Fr.St.-Asd.-F.Gr. [St.-Asd.-Hn.Hp.]) Hl. rais. & Kn. bend. (Wall bars.)
 110-32. (St.-Kn.Bd.-U.Bd.) Am. stretch. s. (m.).
 111-31. (St.-Asd.-Hn.Hp.) Hl. rais. & Kn. bend. rhyth.
 112-31. (St.-Hl.Ra.-Rvs.Am.S.) Kn. bend. with Am. rais. u.
 113-32. (St.-Kn.Fl.Bd.-Am.S.) Am. fling.
 114-31. (St.) Hl. rais. & Kn. bend., with Am. rais. s. & u.
 115-32. (St.-Kn.Fl.Bd.-Hn.Hp.) Hn. clap above head.
 116-32. (St.-Hl.Ra.-Hn.Hp.) Kn. bend. & Am. chang. to Hd. rst., Kn. fl. bend. & chang. to Hn. on hips, Kn. stretch., Hl. lower.
 117-32. (St.-Kn.Bd.-Hd.Rst.) Am. stretch. s. with palms up.
 118-36. (St.-Kn.Fl.Bd.) Jump. to St.-Asd.-Hl.Ra. posn., with Am. bend. u. or swing. m.

FOURTH YEAR (AGE 12).

- 119-31. (St.-Am.S.) Quick Hl. rais. & Kn. bend.
 120-32. (St.-Asd.-Kn.Bd.-Hd.Rst.) Am. stretch. s. with palms up.
 121-31. (St.-Asd.-Hl.Ra.-U.Bd.) Quick Kn. bend. with Am. stretch. s.
 122-32. (St.-Kn.Bd.-Ac.Bd.) Am. fling.
 123-31. (St.-Nk.Rst.) Hl. rais. & Kn. bend.
 124-30. (St.) Quick Hl. rais. *with* Kn. fl. bend., & with Am. swing. s. & u., rhyth.
 125-31. (St.) Hl. rais. & Kn. bend., with Am. stretch. u. & d.
 126-31. (St.-Hl.Ra.-Am.S.) Kn. bend. with Am. bend. ac. (quick & slow).
 127-37. (St.-Crh.) 1 Lg. stretch. s. (1-4 ; later 1-2).

FIFTH YEAR (AGE 13).

- 128-37. (St.-Crh.) 2 Lg. stretch. s.
 129-31. (St.-Asd.-Hl.Ra.-Hd.Rst.) Kn. bend. with Am. stretch. u., Kn. stretch. with Hd. rst.
 130-33. (St.-Asd.-Kn.Bd.-Hn.Hp.) Hl. lower. & rais.
 131-30. (St.-Asd.) Hl. rais. *with* Kn. bend., & with Am. swing. s. & u., rhyth.

LEG EXERCISES.

- 132-32. (St.-Kn.Bd.-Am.S.) Am. fling.
 133-31. (St.-Asd.) Quick Hl. rais. & Kn. bend., with Am. stretch.
 u. & d. (later rhyth.).
 134-32. (St.-Hn.Hp.) Hl. rais. & Hd. turn., Kn. fl. bend. & Nk. rst.
 & Hn. on hips.
 135-31. (St.-Nk.Rst.) Hl. rais. & Kn. bend., & (or with) Hn. on hips
 & Nk. rst.
 136-31. (St.-Am.U.) Quick (slow) Hl. rais. & Kn. bend.
 137-31. (St.-Asd.-Hl.Ra.-Rvs.Am.S.) Slow Kn. bend. with Am. rais. u.
 138-31. (St.-Am.U.) Hl. rais. & Kn. fl. bend. rhyth.
 139-38. (Fr.St.-Asd.-Hl.Ra.-F.Gr.) 1 Kn. bend. (1-4) (Wall bars,
 beam).

SIXTH YEAR (AGE 14).

- 140-32. (St.-Kn.Bd.-U.Bd.) Am. stretch. u.
 141-31. (St.-Hl.Ra.-Nk.Rst.) Slow Kn. fl. bend. & stretch.
 142-31. (St.-Hl.Ra.-U.Bd.) Quick Kn. bend. with Am. stretch. u.
 143-31. (St.-Hl.Ra.-Am.U.) Quick Kn. bend. with Am. bend.
 144-32. (St.-Kn.Fl.Bd.-Am.U.) Am. part.
 145-38. (St.-Asd.-Hl.Ra.-Hn.Hp.) 1 Kn. bend. (1-4).
 146-41. (St.-Kn.Bd.-Am.C.) Quick Kn. stretch. with Am. swing. m.

SEVENTH YEAR (AGE 15).

- 147-31. (St.-Hl.Ra.-Am.U.) Kn. bend. with Am. part.
 148-31. (St.-Asd.-Hl.Ra.-Am.U.) Kn. bend. with Am. part.
 149-31. (St.-Hl.Ra.-Am.U.) Slow Kn. fl. bend. & stretch.
 150-32. (St.-Hl.Ra.-Rvs.Am.S.) Kn. fl. bend., Am. rais. u., Kn. stretch.,
 Am. lower. s. (T.C. 1-4, rhyth.).
 151-32. (St.-Asd.-Hl.Ra.-Rvs.Am.S.) Quick Kn. bend., Am. swing. u.,
 Kn. stretch., Am. swing. s. (T.C. 1-4, rhyth.).
 152-39. (St.-Asd.-Hl.Ra.-1 Kn.Bd.-Nk.Rst.) Alt. Kn. bend. (1-2).

EIGHTH YEAR (AGE 16).

- 153-32. (St.-Asd.-Kn.Bd.-U.Bd.) Am. stretch. s. (u.).
 154-31. (St.-Hl.Ra.-Am.U.) Kn. bend. with Nk. rst.
 155-31. (St.-Nk.Rst.) Hl. rais. & Kn. fl. bend. rhyth.
 156-31. (St.-Asd.-Am.U.) Hl. rais. & Kn. bend. rhyth.
 157-32. (St.-Hn.Hp.) Hl. rais. & Hd. turn., Kn. bend. & Hd. turn.
 (later C.C. 1-12, quick movements).
 158-40. (Fr.St.-Wd.Asd.-1 Kn.Fl.Bd.-F.Gr.) Alt Kn. full bend. rhyth.
 (later without grasp). (Wall bars, or in file with hands on
 shoulders).
 159-40. (St.-Wd.Asd.-Hn.Hp. [Hd.Rst.]) 1 Kn. fl. bend. (later, with
 arm movements added.)

LEG EXERCISES.

NINTH YEAR (AGE 17).

- 160-32. (St.-Kn.Fl.Bd.-U.Bd.) Am. stretch. in various directions.
161-31. (St.-Asd.-Nk.Rst.) Hl. rais. & Kn. bend. rhyth.
162-32. (St.-Asd.-Kn.Bd.-Am.U.) Am. stretch. u.
163-32. (St.-Kn.Bd.-Am.U.) Am. stretch. s. u. s., u. s. u., with Kn.
stretch. between the two series of arm stretchings.
164-42. (St.-1 Kn.Fl.Bd.-1 Lg.F.-F.[S.]Gr.) Hop. with alt. Lg. stretch. f.
(1-2). (Beam, wall bars, or in pairs).

ARM EXERCISES.

TYPES.

- I. Arm positions.
- II. Arm stretching and punching.
- III. Arm swinging.
- IV. Arm raising, parting, circling and turning.
- V. Arm flinging.
- VI. Combinations of :—
 - (i) different arm movements.
 - (ii) arm and leg movements.

I. ARM POSITIONS.

FIRST YEAR (AGE 9).

- 1- 1. (St.) Hn. Hp. posn.
2- 3. (St.) Clp. posn.
3- 4. (St.-Asd.) Hn. Th. posn.
4- 5. (St.) Am. B. posn.
5- 6. (St.) Am. B. Clp. posn.
6- 2. (St.) Low Hn. Hp. posn.
7- 7. (St.) Am. S. posn.
8-13. (St.) Hd. Rst. posn.
9-15. (St.) U. Bd. posn.
10- 8. (St.) Am. U. posn.
11-16. (St.) Ac. Bd. posn.
12- 9. (St.) Am. M. posn.

SECOND YEAR (AGE 10).

- 13-11. (St.) Am. C., posn.
14-10. (St.) Am. F. posn.
15-12. (St.-Asd.) Am. D.-Tr. F. posn.

THIRD YEAR (AGE 11).

- 16-14. (St.) Nk. Rst. posn.

ARM EXERCISES.

FIFTH YEAR (AGE 13).

17-18. (St.) F. Bd. posn.

SIXTH YEAR (AGE 14).

18-17. (St.) Ac. Bd. Clp. posn.

II. ARM BENDING, STRETCHING AND PUNCHING.

FIRST YEAR (AGE 9).

- 19- 8. (St.) Am. stretch. u. in 1 movement.
- 20-15. (St.) Am. bend u. (later : Am. bend. u. & stretch. d. to 10).
- 21-19. (St.-U.Bd.) Am. stretch. m.
- 22-19. (St.-U.Bd.) Am. stretch. m. to 10 (T.C., later C.C.).
- 23-28. (St.-U.Bd.Clen.) Alt. Am. punch. f.
- 24-19. (St.-U.Bd.) Am. stretch. u.
- 25-19. (St.-U.Bd.) Quick Am. stretch. m., & slow Am. bend.
- 26-19. (St.-U.Bd.) Quick Am. stretch. u., & show Am. bend.
- 27-19. (St.-U.Bd.) Am. stretch. m. & d. (later rhyth., T.C.).

SECOND YEAR (AGE 10).

- 28-19. (St.) Am. stretch. s. & d.
- 29-19. (St.-U.Bd.) Am. stretch. u. & d.
- 30-19. (St.-U.Bd.) Am. stretch. d. (s.) (m.) (u.).
- 31-28. (St.-U.Bd.Clen.) Alt. Am. punch. u.
- 32-19. (St.-U.Bd.) Am. stretch. s. & d.
- 33-19. (St.-U.Bd.) Slow Am. stretch. u. & quick Am. bend.
- 34-19. (St.-U.Bd.) Am. stretch. s. & u.
- 35-19. (St.U.Bd.) Am. stretch. m. & d. twice in each direction. (Later, rhyth., T.C.).
- 36-23. St.-Ac.Bd.) Am. stretch. f.
- 37-19. (St.-U.Bd.) Am. stretch. s. & u. twice in each direction. (Later, rhyth., T.C.).
- 38-24. (Hz.Knl.) Am. bend.

THIRD YEAR (AGE 11).

- 39-21. (St.-U.Bd.) 1 Am. stretch. u.
- 40-19. (St.-U.Bd.) Am. stretch. f.
- 41-21. (St.-U.Bd.) 1 Am. stretch. s. (m.).
- 42-19. (St.) Am. stretch. u. & d. (or other 2 directions).
- 43-19. (St.-U.Bd.) Slow Am. stretch. f. & quick Am. bend.
- 44-19. (St.-U.Bd.) Am. stretch. m. (rhyth., without T.C.).
- 45-22. (St.-U.Bd.) Alt. Am. stretch. u. & d.
- 46-25. (Hi.Fr.Sup.) Am. bend.

ARM EXERCISES.

FOURTH YEAR (AGE 12).

- 47-29. (St.-U.Bd.Clen.) 2 Am. punch. u.
- 48-19. (St.-U.Bd.) Am. stretch. in 2 directions.
- 49-19. (St.-U.Bd.) Am. stretch. in 3 directions.
- 50-23. (St.-Ac.Bd.) Slow Am. stretch. f., & quick Am. bend. ac.
- 51-19. (St.) Am. stretch. in 2, 3 or 4 directions. (T.C.).
- 52-19. (St.-U.Bd.) Am. stretch. in 3 directions, 3 times in each direction.
- 53-19. (St.-U.Bd.) Slow Am. stretch. f. & u., & quick Am. bend.
- 54-19. (St.) Am. stretch. in 2 or 3 directions (rhyth. with & later without T.C.).

FIFTH YEAR (AGE 13).

- 55-29. (St.-U.Bd.Clen.) 2 Am. punch. f.
- 56-22. (St.-U.Bd.) Alt. Am. stretch. u. & d. (rhyth.).
- 57-22. (St.-U.Bd.) Alt. Am. stretch. u. & s. (rhyth.).
- 58-19. (St.) Am. stretch, in 3 directions, twice in each direction (later, rhyth., with, & later without, T.C.).
- 59-20. (St.-U.Bd.) Slow Am. stretch. u. ("pushing & pulling").
- 60-24. (Bt.Fr.Sup.-Asd.) Am. bend.

SIXTH YEAR (AGE 14).

- 61-19. (St.) Am. stretch. in 3 or 4 directions (rhyth.).
- 62-22. (St.-U.Bd.) Alt. Am. stretch. f. & s. (rhyth.).
- 63-22. (St.-l.U.Bd.) Alt. Am. stretch u. & d. rhyth. (or other 2 directions).
- 64-26. (Fr.St.-Asd.) Rhyth. fall. f. (Wall bars).

SEVENTH YEAR (AGE 15).

- 65-27. (Pn.Ly.-Asd.-Fh.Rst.) Am. stretch.

III. ARM SWINGING.

FIRST YEAR (AGE 9).

- 66-30. (St.) Am. swing. s.
- 67-30. (St.-Am.S.) Am. swing. d. with slap on leg & s. (1 movement).
- 68-30. (St.) Am. swing. s. & u. with clap above head, & s. & d. with (or without) slap on leg.
- 69-30. (St.-Am.U.) Am. swing. s. & d. & u. again, at whistle.
- 70-30. (St.) Am. swing. f.
- 71-30. (St.-Am.F.) Am. swing. b. & f.
- 72-30. (St.) Am. swing. s. & u.

SECOND YEAR (AGE 10).

- 73-32. (St.-l Am.U.) Am. chang. with f. swing.
- 74-30. (St.) Am. swing. f. & u., s. & d.
- 75-30. (St.-Am.S.) Am. swing. f. with hand clap.

ARM EXERCISES.

THIRD YEAR (AGE 11).

- 76-31. (St.-Rvs.Am.S.) Am. swing. f. with palms up.

FOURTH YEAR (AGE 12).

- 77-30. (St.-Am.B.) Am. swing. f. & u., f. & b.
78-32. (St.-1 Am.U.-1 Am.B.) Am. chang. by swing. f.

FIFTH YEAR (AGE 13).

- 79-33. (St.-Asd.-F.Bd.) Rhyth. Am. swing. s. (later, with Hl. rais. & slight Tr. lean f.).
80-34. (St.-Asd.-F.Bd.) Rhyth. El. & Am. swing. s.
81-35. (St.-[Asd.]-Am.C.) Rhyth. Am. swing. m. (later with Hl. rais.).

SEVENTH YEAR (AGE 15).

- 82-30. (St.-Am.F.) Am. swing. u. & f.
83-31. (St.-1 Am.U.-1 Am.B.) Am. chang. with f. swing, with a step f. at each change.

EIGHTH YEAR (AGE 16).

- 84-30. (St.-Am.F.) Am. swing. u., f. & b., & f. (1-3).

NINTH YEAR (AGE 17).

- 85-36. (St.) Rhyth. Am. swing. f., d. & s. (later, with chang. to alt. Am. swing. ; also with Hl. rais. *with* Kn. bend).

IV. ARM RAISING, PARTING, CIRCLING AND TURNING.

FIRST YEAR (AGE 9).

- 86-41. (St.) El. circl.
87-42. (St.) Free Am. circl.
88- 7. (St.) Am. rais. s.
89-43. (St.Am.S.) Am. circl. spirally.
90- 7. (St.) Am. rais. s. with palms up.
91-10. (St.) Am. rais. f.
92-42. (St.) Free Am. circl. slow & quick.
93-44. (St.-Asd.-Clen.) Quick 1 Am. circl. b.

SECOND YEAR (AGE 10).

- 94-37. (St.) Am. turn. o. (later with deep breathing).

THIRD YEAR (AGE 11).

- 95-38. (St.-Am.U.) Am. part.
96-38. (St.-Rvs.Am.S.) Am. rais. u.
97-39. (St.) Am. rais. s. & u. (T.C. 1-2).

ARM EXERCISES.

FOURTH YEAR (AGE 12).

98-40. (St.) Am. rais. f. & u., lower. s. & d. (T.C. 1-2).

99-45. (St.-Ln.O.-Hn.Kn.) Quick 1 Am. circl. b. ("Bowling exercise").

V. ARM FLINGING.

SECOND YEAR (AGE 10).

100-46. (St.-Am.S.Clen.) Am. fling.

101-46. (St.-Am.S.Clen.) Am. fling. (bend & fling in 1 move.).

THIRD YEAR (AGE 11).

102-46. (St.-Am.S.) Am. fling.

103-46. (St.-Am.S.) Am. fling. (bend & fling in 1 move.).

FOURTH YEAR (AGE 12).

104-46. (St.-Ac.Bd.) Am. fling.

VI. COMBINATIONS (EXAMPLES).

(i) of *Different Arm Movements.*

SECOND YEAR (AGE 10).

105. (St.) Am. swing. f. & stretch. d. (later Am. rais. f.).

106. (St.) Am. stretch. s. & swing. d. with a slap.

107. (St.) Am. stretch. u. & swing. s. & d. with a slap.

108. (St.) Am. stretch. u. & swing. s. & d. without a slap.

FIFTH YEAR (AGE 13).

109. (St.) Am. swing. f., stretch. s., & swing. d.

110. (St.) Am. swing. f. & u., stretch. s. & swing. d.

SIXTH YEAR (AGE 14).

111. (St.-Am.F.) Am. swing. s. with palms up, bend., & stretch. f.

112. (St.) Am. swing. f. & u., & stretch. d.

SEVENTH YEAR (AGE 15).

113. (St.) Am. stretch. u., & lower. s. & d. (T.C. 1-4; 1 & 2 quick, 3 & 4 slow, but counting in even rhythm).

EIGHTH YEAR (AGE 16).

114. (St.) Am. rais. f., stretch. s. & lower. d.

NINTH YEAR (AGE 17).

115. (St.-Am.S.) Am. carry. f. & stretch. s.

(St.-U.Bd.) Am. stretch. s. & bend. ac., fling. & bend. u.

116. (St.) Am. swing. f. & u., stretch. s., bend. ac., stretch. f., & swing. d.

(ii) of *Arm and Leg Movements.*

See Leg Exercises for combinations of arm and leg movements.

DORSAL EXERCISES.

TYPES.

- I. Game forms.
 - II. Head exercises.
 - III. Trunk bending forward or downward in the Standing, Sitting and Kneel Sitting positions, and stretching forward from Trunk Downward position.
 - IV. Spanning exercises.
 - V. Prone lying.
 - VI. Exercises in Hanging Front Rest position.
 - VII. Exercises in Toe Lunge Backward position.
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I. GAME FORMS.

FIRST YEAR (AGE 9).

- 1-12. Indians at Pow-wow.

THIRD YEAR (AGE 11).

- 2-42. Slide the log (lift and lower only).

FOURTH YEAR (AGE 12).

- 3-42. Slide the log (a short distance).

II. HEAD EXERCISES.

FIRST YEAR (AGE 9).

- 4- 1. (St.-Clp.) Hd. turn.
- 5- 1. (St.-Clp.) Quick Hd. turn.
- 6- 2. (St.) Hd. drop. f. & stretch. u.
- 7- 3. (St.) Hd. bend. f.
- 8- 4. (St.) Hd. drop. b. & stretch. u.
- 9- 5. (St.-Clp.) Hd. bend. s.
- 10- 6. (St.-Asd.) Hn. Th. posn.
- 11- 7. (St.-Asd.-Hn.Th.) Bk. stretch, with arm-pull.
- 12- 8. (St.-Asd.-Hn.Th.) Hd. press. b.

SECOND YEAR (AGE 10).

- 13- 8. (St.-Asd.-Hn.Th.) Rhyth. Hd. press. b.
- 14- 1. (St.-Clp.) Quick Hd. turn. from s. to s.

FOURTH YEAR (AGE 12).

- 15- 8. (St.) Hd. press. b.

FIFTH YEAR (AGE 13).

- 16- 8. (St.) Hd. press. b. with Am. turn. o.
- 17- 8. (St.-Am.S.) Hd. press. b. with Am. turn.

DORSAL EXERCISES.

III. TRUNK BENDING FORWARD OR DOWNWARD IN STANDING, SITTING AND KNEEL SITTING POSITIONS.

FIRST YEAR (AGE 9).

- 18-14. (Hz.Sit.-Kn.Ra.Op.-Kn.Gr.) Tr. bend. d.
- 19-15. (St.-Asd.) Tr. bend. d. to grasp ankles. (posn. taken with jump).
- 20-17. (St.-Asd.) Tr. bend. d. to touch toes (posn. taken with jump).
- 21-16. (St.-Bk.Rst.-D.Gr.) Tr. bend. d. (Wall bars).
- 22-15. (St.-Asd.) Tr. bend. d., with hands behind thighs.
- 23- 9. (St.-Asd.-Hn.Hp.) Tr. bend. f.
- 24-17. (St.) Tr. bend. d. to touch toes or floor with fingers, knuckles,
or palms, in rhythm with breathing.
- 25-11. (St.-[Asd.]-Hn.Hp.-Tr.F.) Quick Hd. turn. (T.C. 1-4).
- 26- 9. (St.-[Asd.]-U.Bd.) Tr. bend. f.
- 27-10. (St.) Tr. bend. f. *with* Am. rais. s. (rather quick at first).
- 28- 9. (St.-Ft.Cl.-Hn.Hp.) Tr. bend. f.

SECOND YEAR (AGE 10).

- 29-17. (St.-Asd.-Hn.Hp.) Rhyth. Tr. bend. d.
- 30-15. (St.-Asd.) Tr. bend. d. to grasp ankles, Hn. on hips, & Tr.
stretch. u.
- 31-10. (St.-[Asd.]-U.Bd.) Tr. bend. f. *with* Am. stretch. s.
- 32- 9. (St.-Asd.-Ac.Bd.) Tr. bend. f.
- 33-17. (St.-Hn.Hp.) Tr. bend. d.
- 34-11. (St.-[Asd.]-U.Bd.-Tr.F.) Am. stretch. s.
- 35- 9. (St.-Ft.Cl.-Ac.Bd.) Tr. bend. f.
- 36-15. (St.) Tr. bend. d. to grasp ankles.
- 37-15. (St.-Asd.) Tr. bend. d. with hands behind thighs, Hn. on hips,
& Tr. stretch. u.
- 38-19. (St.-Asd.-Am.D.-Tr.F.) Rhyth. Tr. press. d. to touch floor
between legs.
- 39-28. (Knl.Sit.-Tr.D.-Fh.Rst.) Am. stretch. f. along floor.
- 40-29. (Knl.Sit.-Tr.D.-Fh.Rst.) Tr. stretch. f. with El. swing. s.

THIRD YEAR (AGE 11).

- 41-10. (St.-Clen.) Quick Tr. bend. f. *with* Am. swing. f. & u.
- 42-10. (St.-Am.S.) Tr. bend. f. *with* Hn. turn.
- 43-11. (St.-[Asd.]-Ac.Bd.-Tr.F.) Am. stretch. f.
- 44-16. (St.-Bk.Rst.-D.Gr.) Tr. bend. d. with Hn. shift d. (Wall bars).
- 45-22. (St.-Asd.-Hn.Hp.-Tr.F.) Tr. bend. d.
- 46- 9. (St.-Asd.-Am.S.) Tr. bend. f.
- 47-29. (Knl.Sit.-Tr.D.-Fh.Rst.) Tr. stretch. f. with Am. swing. s.
- 48-11. (St.-Asd.-Hn.Hp.-Tr.F.) Hd. press. b.
- 49-18. (St.-Crh.) Kn. stretch.

DORSAL EXERCISES.

FOURTH YEAR (AGE 12).

- 50-10. (St.-Ft.Cl.) Quick Tr. bend. f. *with* Am. swing. f. & u.
- 51-24. (St.-Hn.Hp.-Tr.F.) Tr. bend. d. to grasp ankles, Tr. stretch. f. *with* Hn. on hips.
- 52-11. (St.-Asd.-Am.S.-Tr.F.) Am. fling.
- 53- 9. (St.-Rvs.Am. S.) T. bend. f.
- 54-20. (St.-Asd.-Tr.D.-Ak.Gr.) Rhyth. Tr. press. d.
- 55-23. (St.Hn.Hp.) Tr. bend. d., stretch. f. & stretch. u. (3 moves).
- 56-23. (St.-Hn.Hp.) Tr. bend. f. & d., stretch. f. & u. (1-4, or in slow even rhythm with slight pause in each posn.).
- 57-11. (St.-Hn.Hp.-Tr.F.) Slow. Am. stretch. s. with palms up.
- 58-24. (St.-Hn.Hp.-Tr.F.) Tr. bend. d. to touch floor, Tr. stretch. f. *with* Hn. on hips (slow rhythm).
- 59-30. (Knl.Sit.-Am.B.Clp.-Tr.D.) Tr. stretch. f. with Am. stretch. b.
- 60-30. (Knl.Sit.-Hl.Gr.-Tr.D.) Tr. stretch. f. with pull on heels.
- 61-25. (St.-Asd.-Am.D.-Tr.F.) Rhyth. Tr. press. d. to touch floor between legs, followed by Hn. clasp behind back & Tr. stretch. f. with Am. stretch. b.
- 62-12. (Hz.Sit.-Kn.Ra.Op.-Rvs.Am.B.) Am. rais. s. & u., later Am. swing. u. with clap above head.

FIFTH YEAR (AGE 13).

- 63-25. (St.-Asd.-Am.B.Clp.-Tr.F.) Tr. bend. d. & stretch. f. with Am. stretch. b.
- 64- 9. (St.-Ft.F.-Hn.Hp.) Tr. bend. f.
- 65-11. (St.-[Asd.]-Am.S.-Tr.F.) Am. circl. spirally.
- 66-24. (St.-Ac.Bd.-Tr.F.) Tr. bend. d. to grasp ankles (touch floor). Tr. stretch. f. *with* Ac. Bd. (slow rhythm).
- 67-11. (St.-Am.S.-Tr.F.) Am. fling. (in 1 move).
- 68-24. (St.-Am.S.-Tr.F.) Tr. bend. d. to touch floor (grasp ankles). Tr. stretch. f. *with* Am. rais. s. (slow rhythm with slight pause in each posn. Fists may be clenched.)
- 69-24. (St.-Am.S.-Tr.F.) Tr. bend. d. to grasp ankles. Tr. stretch. f. *with* Am. swing. s.
- 70-12. (Hz.Sit.-Kn.Ra.Op.-F.Bd.) Rhyth. Am. swing. s.
- 71-13. (Hz.Sit.-Am.C.) Am. swing. m.
- 72-25. (Hz.Sit.-Kn.Ra.Op.-Nk.Gr.-Tr.D.) Tr. stretch. u.
- 73-21. (St.-Wd.Asd.-Nk.Gr.-Tr.D.) Rhyth. Tr. press. d.

SIXTH YEAR (AGE 14).

- 74-11. (St.-Asd.-Am.D.-Tr.F.) Rhyth. Am. swing. s. from F.Bd.
- 75-11. (St.-[Asd.]-U.Bd.-Tr.F.) 2 Am. punch. u.
- 76-10. (St.-Asd.-Am.U.) Quick Tr. bend. f. *with* Am. bend.
- 77-15. (St.-Ft.F.) Tr. bend. d. to grasp front ankle.

DORSAL EXERCISES.

- 78-10. (St.-U.Bd.) Quick Tr. bend. f. *with* Am. stretch. u.
79-11. (St.-Asd.-Am.B.-Tr.F.) Am. swing. f. & u., d. & b.
80-11. (St.-Asd.-Rvs.Am.B.-Tr.F.) Am. swing. s. & u. to clap hands
over head.
81-12. (Hz.Sit.-Kn.Ra.Op.-F.Bd.-Tr.F.) Rhyth. El. & Am. swing. s.

SEVENTH YEAR (AGE 15).

- 82- 9. (St.-Asd.-Am.U.) Tr. bend. f.
83- 9. (St.-Am.U.) Tr. bend. f.
84-24. (St.-Hd.Rst.-Tr.F.) Tr. bend. d. to touch floor, Tr. stretch. f.
with Hd. rst. (slow rhythm).
85- 9. (St.-Ft.F.-Am.S. [U.]) Tr. bend. f.
86-11. (St.-[Asd.]-U.Bd.-Tr.F.) Am. stretch. u. (slow or quick).
87-11. (St.-[Asd.]-Rvs.Am.S.-Tr.F.) Am. rais. u.
88-11. (St.-Asd.-Am.D.-Tr.F.) Rhyth. El. & Am. swing. s. from F. Bd.
89-26. (St.) Rhyth. Tr. bend. d. with Am. c., & Tr. stretch. u. with
Am. swing. m.
90-25. (St.-Asd.-Nk.Gr.-Tr.F.) Rhyth. Tr. press. d., followed by
rhyth. Tr. stretch. f. *with* Nk. rst.

EIGHTH YEAR (AGE 16).

- 91- 9. (St.-Nk.Rst.) Tr. bend. f.
92-24. (St.-Nk.Rst.-Tr.F.) Tr. bend. d. to grasp ankles (touch floor).
Tr. stretch. f. *with* Nk. rst.
93-11. (St.-1 Am.U.-1 Am.B.-Tr.F.) Am. chang. with swing. f.
94-11. (St.-[Asd.]-Am.U.-Tr.F.) Am. part.
95-27. (St.-Wd.Asd.-Am.B.-Tr.F.) Rhyth. Am. swing. f. & u., Tr.
bend. d. to beat Hn. on floor, Tr. stretch. f. with Am. swing.
d. & b.

NINTH YEAR (AGE 17).

- 96-24. (St.-Am.U.-Tr.F.) Tr. bend. d. to grasp ankles (touch floor),
Tr. stretch. f. *with* Am. rais. u.
97- 9. (St.-Ft.F.-Nk.Rst. [Am.U.]) Tr. bend. f.
98-11. (St.-1 Am.U.-1 Am.F.-Tr.F.) Am. chang. with swing. f.
99-11. (St.-[Asd.]-Am.U.-Tr.F.) Am. stretch. s. & u.
100-31. (Knl.Sit.-Tr.F.-U.Gr.) Rhyth. Tr. press. d. (:). (Wall bars).
101-32. (Hi.St.-Asd.-Tr.F.-U.Gr.) Am. bend. (:). (Wall bars).

IV. SPANNING EXERCISES.

FIRST YEAR (AGE 9).

- 102-33. (Bk.Ly.-Ac.Bd.) Span.

SECOND AND THIRD YEARS (AGES 10, 11).

- 103-34. (Bk.Ly.-U.Gr.) Span. (Wall bars).

DORSAL EXERCISES.

THIRD YEAR (AGE 11).

- 104-33. (Bk. Ly.-Am.S.) Span.
105-35. (Fr.St.-F.Gr.) Taking F. Hg. posn. (Wall bars)

FOURTH YEAR (AGE 12).

- 106-33. (Bk.Ly.-Am.M.) Span.
107-36. (Knل.Sit.-M.[U.]Gr.) Span. (Wall bars).

FIFTH YEAR (AGE 13).

- 108-33. (Bk.Ly.-Am.U.) Span.

SIXTH YEAR (AGE 14).

- 109-37. (Hz.Sit.-Asd.-Fxd.) Hd. press. b. & Tr. lower. b. to rest head on floor. (Wall bars).
110-38. (Lean St.-M.[U.]Gr.) Span. (Wall bars).

NINTH YEAR (AGE 17).

- 111.-39. (Hz.Sit.-Bk.Rst.-Ft.Rst.-U.Gr.) Span. (:). (Ft. against wall bars).
112-40. (Bk.Ly.-Kn.Ra.-U.Gr.) Span. (:). (Grasp 3rd or 4th bar above floor.)
113-41. (Knل.-U.[M.]Gr.-Tr.B.) Span. (:).
114-37. (Hz.Sit.-Asd.-Fxd.-Am.U.) Hd. Press. b. with Tr. lower. b. to rest hands on floor. (Wall bars).

V. PRONE LYING.

FIRST YEAR (AGE 9).

- 115-43. (Pn.Ly.) Hd. press. b.
116-44. (Pn.Ly.-Am.U.) Hd. press. b. with Am. & Lg. rais.

SECOND YEAR (AGE 10).

- 117-45. Hi. Pn. Ly.-Hn. Hp. posn.
118-46. (Hi.Pn.Ly.-Hn.Hp.) Hd. turn.

THIRD YEAR (AGE 11).

Repeat exercises of First and Second Years.

- 119-45. Hi. Pn. Ly.-Ac. Bd. posn.

FOURTH YEAR (AGE 12).

- 120-48. (Hi.Pn.Ly.-Hn.Hp.) Tr. lower.
121-48. (Hi.Pn.Ly.-Ac.Bd.) Tr. lower.

FIFTH YEAR (AGE 13).

- 122-47. (Hi.Pn.Ly.-U.Bd.Clen.) 2 Am. punch. f.
123-45. Hi. Pn. Ly.-Hd. Rst. posn.
124-45. Hi Pn. Ly.-Am. U. posn.

DORSAL EXERCISES.

SIXTH YEAR (AGE 14).

- 125-47. (Hi.Pn.Ly.-U.Bd.) Am. stretch. s.
- 126-47. (Hi.Pn.Ly.-Ac.Bd.) Am. fling.
- 127-48. (Hi.Pn.Ly.-Hd.Rst.) Tr. lower.

SEVENTH YEAR (AGE 15).

- 128-46. (Hi.Pn.Ly.-Ac.Bd.) Am. stretch. f.
- 129-45. Hi. Pn. Ly.-Nk. Rst. posn.
- 130-48. (Hi.Pn.Ly.-Nk.Rst.) Tr. lower.

EIGHTH YEAR (AGE 16).

- 131-47. (Hi.Pn.Ly.-U.Bd.) Am. stretch. u.
- 132-47. (Hi.Pn.Ly.-Am.U.) Am. part.

NINTH YEAR (AGE 17).

- 133-47. (Hi.Pn.Ly.-Am.U.) Am. chang. to Nk. rst.
- 134-48. (Hi.Pn.Ly.-Am.U.) Tr. lower.

VI. EXERCISES IN HANGING FRONT REST POSITION.

SECOND AND THIRD YEARS (AGES 10 AND 11).

- 135-49. (Hi.St.-U.Gr.) Hd. press. b. with Lg. lift. b. (straight legs).
(Wall bars).
- 136-49. (Hi.St.-U.Gr.) Hd. press. b. with Lg. lift. b. (with knees bent).
(Wall bars).

VII. EXERCISES IN TOE LUNGE BACKWARD POSITION.

SEVENTH YEAR (AGE 15).

- 137-50. (St.-Toe Ln.-Hn.Hp.) Hd. press. b.
- 138-50. (St.-Toe Ln.-Hn.Hp.) Am. bend. & Hn. Hp.
- 139-50. (St.-Toe Ln.-U.Bd.) Am. stretch. s.

EIGHTH YEAR (AGE 16).

- 140-50. (St.-Toe Ln.-Ac.Bd.) Am. fling.
- 141-50. (St.-Toe Ln.-Ac.Bd.) Am. stretch. f.
- 142-51. (St.-Ac.Bd.) Toe. lung. b. with Am. fling.
- 143-51. (St.-Ac.Bd.) Toe lung. b. with Am. stretch. f.
- 144-52. (St.-Toe Ln.-Hn.Hp. [U.Bd.]) Tr. lower. to hz.

NINTH YEAR (AGE 17).

- 145-51. (St.-U.Bd.) Toe lung. b. with Am stretch. u.
- 146-50. (St.-Toe Ln.-U.Bd.) Am. stretch. u.
- 147-50. (St.-Toe Ln.-Am.U.) Am. part.
- 148-52. (St.-Toe Ln.-Nk.Rst.) Tr. lower. to hz.
- 149-52. (St.-Toe Ln.-Am.U.) Tr. lower. to hz.

HEAVING EXERCISES.

TYPES.

- I. Hand shifting in Hi. St. position.
 - II. Hanging positions, and movements in them, including Heaving and Lowering.
 - III. Arm walks and Arm jumps.
 - IV. Circling.
 - V. Climbing :—
 - (i) Horizontally along wall bars.
 - (ii) Ladder climbing (on wall ladders, window ladders, and rope ladders).
 - (iii) Rope climbing.
 - VI. Twisting in window ladders.
 - VII. Combined exercises.
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I. HAND SHIFTING IN HIGH STANDING POSITION.

FIRST YEAR (AGE 9).

- 1- 1. (Hi.St.-Hv.Gr.) Alt. Hn. shift. d. & u. with legs straight. (Wall bars).

SECOND YEAR (AGE 10).

- 2- 2. (Hi.St.-Hv.Gr.) 2 Hn. shift. d. & u. with legs straight. (Wall bars).

II. HANGING POSITIONS AND MOVEMENTS IN THEM, INCLUDING HEAVING AND LOWERING.

FIRST YEAR (AGE 9).

- 3- 3. (Hi.St.-U.Gr.) Taking Hg. posn. (Wall bars).
4- 4. (Fr.St.-Hv.Gr.) Jump. u. & d. on wall bars (lowest 5 rungs).
5- 5. Hanging catch game.
6-6, 7. Hg. Or. Gr. & Hg. Ur. Gr. posns. (Beam).
7- 9. Hg. In. Gr. posn. (Arm ladder, two ropes).
8-10. (Hg.-Or.Gr.) Lg. swing. s.
9-10. (Hg.-Or.Gr. [In.Gr.]) Lg. part.

SECOND YEAR (AGE 10).

- 10-31. B. Hg. posn.
11-33. (B.Hg.-Asd.) Hn. slap on beam.
12-33. (B.Hg.) Quick Hd. turn.
13-33. (B.Hg.-Asd.) Hn. slap on floor.
14-12. (Pn.Ly.) Heav. along bench.

HEAVING EXERCISES.

THIRD YEAR (AGE 11).

- 15-32. F.Hg. posn. (Wall bars, beam).
- 16-35. (B.Hg.) Chang. between B. Hg. & F. Hg. with a run. (Beam).
- 17-14. (Hi.St.-Hv.Gr.) Tr. lower. (first with one foot resting). (Wall bars, 2 beams).
- 18-15. (Hi.St.-Kn.Fl.Bd.-U.Gr.) Heav. with Kn. stretch. (first with both Ft. resting, later with 1 Ft.). (Wall bars, 2 beams).
- 19-34. (Bt.B.Hg.) Tr. rais.

FOURTH YEAR (AGE 12).

- 20-31. (Fr.St.-F.Gr.) Taking B.Hg. posn. & return to S.P. with heav. (Beam at chest height).
- 21-33. (B.Hg.) Alt. Lg. rais.
- 22-16. (Hi.St.-Bk.Rst.-Hv.Gr.) Tr. lower. (Wall-bars, 2 beams).
- 23-13. (Bk.Ly.) Heav. along bench.
- 24-33. (B.Hg.) Heav.
- 25-17. (Fr.St. [Hi.St.]-Hv.Gr.) Lg. rais. b. with Kn. bend. (Wall bars).
- 26- 9. Hg.-In. Gr. posn. (Beam).

FIFTH YEAR (AGE 13).

- 27- 8. Hg.-Alt. Gr. posn.
- 28-33. (Hv.B.Hg.) Alt. Lg. rais.
- 29-35. (B.Hg.) Chang. between B. Hg. & F. Hg. posns. with heav.
- 30-34. (Bt.B.Hg.) Heav.
- 31-19. (St. Or.U.Gr.) Heav. (Beam).
- 32-19. (St.Ur.U.Gr.) Heav. (Beam).
- 33-19. (St. Alt.U.Gr.) Heav. (Beam).
- 34-18. (Hi.St.-Asd.-F.Gr.-Tr.F.) Heav. (:). (Wall bars).

SIXTH YEAR (AGE 14).

- 35-36. (F.Hg.) Heav. (:). (Wall bars, beam).
- 36-19. (Hg.-Ur.Gr.) Heav.
- 37-19. (Hg.-Alt.Gr.) Heav.
- 38-19. (Hg.-Or.Gr.) Heav.
- 39-19. (Hg.-In.Gr.) Heav. (Arm ladder, 2 ropes).

SEVENTH YEAR (AGE 15).

- 40-20. Swing, with heav. & hi. Lg. rais. in f. swing. (2 ropes).

III. ARM WALKS AND ARM JUMPS.

FIRST YEAR (AGE 9).

- 41-21. (Hg.-Or.Gr.) Am. walk s., free form with short quick steps. (Wall bars first, then beam).

HEAVING EXERCISES.

SECOND YEAR (AGE 10).

- 42-25. (Hg.-Or.Gr.) Am. walk s. with turn at mid-beam.

THIRD YEAR (AGE 11).

- 43-22. (Hg.-Or.Gr.) Am. walk d. (Wall bars).
44-24. (Hg.-In.Gr.) Am. walk b., free form. (Arm ladder).
45-11. (Hg.-Or.Gr.) Lg. swing. s. with alt. Hn. lift. (Beam, arm ladder).
46-29. (Hg.-Or.Gr.) Am. walk. s. with Lg. swing. (Beam, arm ladder).
47-21. (Hg.-Or.Gr.) Am. walk s. (correct form without swing).
48-24. (Hg.-In.Gr.) Am. walk b. (Arm ladder).
49-37. (B.Hg.-In.Gr.) Am. & Lg. walk b. (Beam at chest height).
(Later in Hv. Hg. posn.).

FIFTH YEAR (AGE 13).

- 50-21. (Hg.-Alt.Gr.) Am. walk s., free form.
51-29. (Hg.-Alt.Gr.) Am. walk with a swing & a turn at each step.

SIXTH YEAR (AGE 14).

- 52-26. (Hg.Alt.Gr.) Am. walk s. (correct form).

SEVENTH YEAR (AGE 15).

- 53-30. (Hg.-Or.Gr.) Am. walk s. stepping u. & d. with Lg. swing.
(2 beams).
54-27. (Hg.-Ur.Gr.) Am. walk s. with turn at each step.
55-24. (Hv.Hg.-In.Gr.) Am. walk b. (Arm ladder).
56-23. (Hv.Hg.-Alt.Gr.) Am. walk s.
57-28. (Hv.Hg.-In.Gr.) Am. jump d. (2 ropes).
58-22. (Hv.Hg.-Or.Gr.) Am. walk d. (2 ropes, wall ladder).

EIGHTH YEAR (AGE 16).

- 59-27. (Hg.-Alt.Gr.) Am. walk with turn., heav. & lower. at each step.
(Beam).
60-27. (Hg.-Ur.Gr.) Am. walk s. with turn. at each step, & with heav.
& lower, in each Ur. Gr. posn.
61-21. (Hv.Hg.-Ur.Gr.) Am. walk s. (Beam).
62-21. (Hv.Hg.-Or.Gr.) Am. walk s. (Beam).
63-24. (Hv.Hg.-In.Gr.) Am. walk b. (Beam).
64-28. (Hv.Hg.-In.Gr.) Am. jump b. (Arm ladder).

NINTH YEAR (AGE 17).

- 65-27. (Hg.-Ur.Gr.) Am. walk s. with turn, heav. & lower. at each
step. (Beam).
66-24. (Hv.Hg.-In.Gr.) Am. walk f. (Arm ladder).
67-27. (Hv.Hg.-Alt.Gr.) Am. walk with turn. on one arm. (Beam).

HEAVING EXERCISES.

- 68-28. (Hv.Hg.-In.Gr.) Am. jump u. (2 ropes).
69-28. (Hv.Hg.-In.Gr.) Am. jump f. (Arm ladder).
70-28. (Hv.Hg.-Or.Gr.) Am. jump s. (Beam).
71-22. (Hv.Hg.-Or.Gr.) Am. walk d. (Window ladder).

IV. CIRCLING.

FIRST YEAR (AGE 9).

- 72-38. (St.-Rvs.D.Gr.) Circl. d. with bent knees & hips. (Beam at hip height).

SECOND YEAR (AGE 10).

- 73-39. (Fr.St.-Tr.D.-B.Gr.) Lg. rais. to Rvs. Hg. posn. (Wall bars).

THIRD YEAR (AGE 11).

- 74-40. (St.-Ft.F.-Ur.Hv. Gr.) Circl. u. & d. with help of feet on upper beam. (Two beams, the lower at chest height).
75-41. (St.-Ft.F.-Ur.Hv.Gr.) Circl. u. (Beam at chest height).
76-42. (St.-In.Hv.Gr.) Circl., & later return circl. (2 ropes).

FOURTH YEAR (AGE 12).

- 77-43. (St.-In.Hv.Gr.) Circl. to "swallow's nest" (2 ropes).

FIFTH YEAR (AGE 13).

- 78-44. (St.-In.U.Gr.) Circl. (2 ropes).

SIXTH YEAR (AGE 14).

- 79-45. (St.[Hg.]-Ur.Gr.) Circl. u. & d. (Beam).

EIGHTH YEAR (AGE 16).

- 80-46. (Bal.Sup.) Circl. d. with straight knees. (Beam).
81-47. (Hi.Sit.) Circl. down b. (Beam).

NINTH YEAR (AGE 17).

- 82-48. (Hi.Sit.) Circl. b. to Rvs. Hg. posn. & return. to Hi. Sit. posn. (Beam).

V. CLIMBING.

(i) *Horizontal Climbing along Wall Bars.*

FIRST YEAR (AGE 9).

- 83-49. (Hi.St.-Hv.Gr.) Hz. climb., free form. (Wall bars).
84-49. (Hi.St.-Hv.Gr.) Hz. climb., hand & foot of each side moving together. (Wall bars).

SECOND YEAR (AGE 10).

- 85-49. (Hi.St.-Hv.Gr.) Hz. climb., both hands then both feet moving together. (Wall bars).

HEAVING EXERCISES.

(ii) *Ladder Climbing.*

FIRST YEAR (AGE 9).

- 86-50. (Fr.St.) Climb. u. wall bars, free form. (Later this can be taken as a race).

SECOND YEAR (AGE 10).

- 87-50. Ladder climb., free form. (Wall ladders).

THIRD YEAR (AGE 11).

- 88-51. (Fr.St.-Hv.Gr.) Climb. u. wall bars, both feet then both hands moving together.

- 89-50. Ladder climb., correct form. (Wall or Window ladders).

FIFTH YEAR (AGE 13).

- 90-50. Ladder climb. (Rope ladders).

(iii) *Rope Climbing.*

FOURTH YEAR (AGE 12).

- 91-52. Preparatory climbing posns. on 2 ropes.

- 92-53. Climb. 2 ropes.

FIFTH YEAR (AGE 13).

- 93-56. Making fast on 2 ropes.

- 94-54. Preparatory climbing posns. on 1 rope.

- 95-55. Climb. 1 rope.

- 96-57. Making fast on 1 rope.

SIXTH YEAR (AGE 14).

- 97-58. Climb. hz. along a line of ropes.

- 98-59. Climb. diag. d. along a line of ropes.

EIGHTH YEAR (AGE 16).

- 99-60. Climb. diag. u. along a line of ropes.

VI. TWISTING IN WINDOW LADDERS.

SECOND YEAR (AGE 10).

- 100-61. (Sit.) Hz. twist., Hd. leading.

- 101-62. (Sit.) Vert. twist. u., Hd. leading.

- 102-63. (Sit.) Vert. twist. d., Ft. leading.

- 103-64. (Sit.) Diag. twist. d., Ft. leading.

- 104-65. (Sit.) Hz. twist., Ft. leading.

THIRD YEAR (AGE 11).

- 105-66. (Sit.) Diag. twist. u., Hd. leading.

FOURTH YEAR (AGE 12).

- 106-67. (Sit.) Diag. twist. d., Hd. leading.

HEAVING EXERCISES.

VII. COMBINED EXERCISES.

- 107-68. (Bal.Sup.-Rvs.Gr.) Circle d. to St.-Kn.Bd.-Ur.Gr., throw legs f. to B.Hg.-Ur.Gr. & circle u. to Bal. Sup., dismt. by jump. b.
108-68. (Hg.-Or.Gr.) Heave, then press up to Bal. Sup. posn., turn to Sit. posn., circle b. to Rvs. Hg., return circle to Sit. posn., turn to Bal. Sup. posn., circle down to Hg.-Ur. Gr. posn., circle u. to Bal. Sup. posn., dismt. by jump. f. under beam.
109-68. (St.-Ur.Hv.Gr.) Circle u. to Bal. Sup. on lower beam, turn to Hi. Sit. posn., circle u. to Bal. Sup. on upper beam, circle down f. to Hi. Sit. posn. on lower beam, circle down b. to ground.

BALANCE EXERCISES.

TYPES.

- I. Game forms.
II. On the ground :—
 (i) Knee raising and movements in St.-Kn.Ra. position.
 (ii) Leg raising and carrying.
 (iii) Balance marching.
 (iv) Balance Lunge position.
III. On apparatus :—
 (i) Mounting to Balance Standing, and exercises while standing on one or both legs.
 (ii) Balance marching and running on sloping bench.
 (iii) Exercises from Side Sitting position.

I. GAME FORMS.

FIRST YEAR (AGE 9).

- 1- 1. Grasp one foot raised backwards, and later hop on spot.
2- 2. Raise knee to forehead with help of hands.
3- 3. Hop round on spot, holding one foot behind with opposite hand.
4- 4. Hug the knee.
5- 4. Hug the knee and hop on spot.
6- 4. Hop on spot, and at whistle stop and hug knee to chest.
7- 5. Hopping charges.
8- 6. Stand on one leg, holding the other ankle in front with opposite hand and change feet and hands (slow, quick).
9- 6. Hopping race, holding the free ankle in front with opposite hand.
10- 7. Hopping wrestle.
11- 8. Crow Hop.
12- 9. Cat crawl along bench or beam.

SECOND YEAR (AGE 10).

- 13-10. Kick the hand sideways.
 14-10. Kick the hand forward.
 15-11. Limping in a ring, in pairs.
 16-12. Hopping tug-of-war.

II. EXERCISES ON THE GROUND.

(i) *Knee Raising and Movements in St.-Kn.Ra. Position.*

FIRST YEAR (AGE 9).

- 17-13. (St.) Mark, time with hi. Kn. rais.

SECOND YEAR (AGE 10).

- 18-13. (St.-Toe F.-Hn.Hp.) Kn. rais.
 19-13. (St.-Hn.Hp.) Alt. Kn. rais. (T.C. 1-4).
 20-14. (St.-Kn.Ra.-Hn.Hp.) Ak. bend, & stretch., free.
 21-13. (St.) Kn. rais. with Am. rais. s.
 22-13. (St.-Toe F.-Am.S.) Kn. rais.

FOURTH YEAR (AGE 12).

- 23-15. (St.-Hn.Hp.) Kn. rais. & Lg. stretch. b.
 24-15. (St.-Kn.Ra.-Hn.Hp.) Lg. stretch. b.

FIFTH YEAR (AGE 13).

- 25-15. (St.-Kn.Ra.-U.Bd.) Lg. stretch. b. with Am. stretch. u.
 26-15. (St.) Kn. rais. & Lg. stretch. b. with Am. rais. s. & u.

SIXTH YEAR (AGE 14).

- 27-13. (St.-Nk.Rst.) Kn. rais.
 28-15. (St.-Hn.Hp.) Kn. rais. & Lg. stretch. f.
 29-15. (St.-Hn.Hp.) Kn. rais. & Lg. stretch. f. & b.
 30-16. (St. Toe S. [Asd.] -Hn.Hp.) Kn. rais.

SEVENTH YEAR (AGE 15).

- 31-13. (St.-Am.U.) Kn. rais.
 32-15. (St.-Nk.Rst.) Kn. rais. & Lg. stretch. f.
 33-15. (St.-Kn.Ra.-U.Bd.) Lg. stretch. f. with Am. stretch. s.

EIGHTH YEAR (AGE 16).

- 34-17. (St.-Wd.Asd.-1 Kn.Bd.-Hn.Hp.) Rhyth. Take-off with Kn. rais. (Later with Am.S.in the S.P. & Am.bend. & stretch. s.).
 35-15. (St.-Kn.Ra.-Nk.Rst.) Lg. stretch. f.
 36-15. (St.-Kn.Ra.-U.Bd.) Lg. stretch. b. & f. with Am. stretch. u. & s.

BALANCE EXERCISES.

NINTH YEAR (AGE 17).

- 37-18. (St.-Kn.Ra.-Hn.Hp.) Toe lung. b. (later with Am. stretch. s.).
- 38-15. (St.) Kn. rais. & Lg. stretch. f. with slow Am. stretch. u.
- 39-15. (St.-Am.U.) Kn. rais. & Lg. stretch. b. (f. & b.).

(ii) *Leg Raising and Carrying.*

FIRST YEAR (AGE 9).

- 40-19. (St.-Am.S.) Lg. swing. s. & d.
- 41-19. (St.) Lg. swing. s. & d. with Am. swing. s. & d.

SECOND YEAR (AGE 10).

- 42-19. (St.-Toe S.-Hn.Hp.) Lg. rais. s.
- 43-19. (St.-Toe S.) Lg. & Am. rais. s.
- 44-20. (St.-Toe F.-Hn.Hp.) Slight Lg. rais. f.
- 45-20. (St.-Hn.Hp.) Lg. rais. f.

THIRD YEAR (AGE 11).

- 46-19. (St.-Hn.Hp.) Lg. rais. s.
- 47-19. (St.) Lg. & Am. rais. s. (slow).
- 48-19. (St.) Lg. rais. s. with Am. rais. s. & u.

FOURTH YEAR (AGE 12).

- 49-19. (St.-U.Bd.) Lg. rais. s. with slow Am. stretch. u.
- 50-19. (St.-Lg.S.-Am.S.) Am. circl. spirally.
- 51-21. (St.-Hn.Hp.) Lg. rais. b.
- 52-22. (St.-Lg.F.-Hn.Hp.) Lg. carry. s. (slow, later quick).
- 53-22. (St.-Lg.S.-Hn.Hp.) Lg. carry. b. (slow, later quick).

FIFTH YEAR (AGE 13).

- 54-19. (St.-Rvs.Am.S.) Lg. rais. s. with Am. rais. u.
- 55-19. (St.) Lg. swing. s. with Am. swing. s. (hold posn. & lower slow).
- 56-22. (St.-Lg.S.-Hn.Hp.) Lg. carry. f. (slow, later quick).
- 57-22. (St.-Lg.F.-Hn.Hp.) Lg. carry. s. & b. (slow, later quick).

SIXTH YEAR (AGE 14).

- 58-19. (St.-Am.U. [Nk.Rst.]) Lg. rais. s.
- 59-22. (St.-Lg.F.-Nk.Rst.) Lg. carry. s. (slow, later quick).
- 60-22. (St.-Lg.S.-Nk.Rst.) Lg. carry. b. (slow, later quick).
- 61-22. (St.-Lg.S.-Nk.Rst.) Lg. carry. f. & s., b. & s. (slow, later quick).

SEVENTH YEAR (AGE 15).

- 62-19. (St.-Lg.S.-Am.S.) Lg. & Am. swing. d. & u. without pause.
- 63-21. (St.-Am.S.) Lg. rais. b. with Am. rais. u.
- 64-22. (St.-Lg.F.-Am.U.) Lg. carry. s. (s. & b.) (slow, later quick).
- 65-23. (St.-Low Hn.Hp.) Tr. lower. s. with Lg. rais.

BALANCE EXERCISES.

EIGHTH YEAR (AGE 16).

- 66-20. (St.-Rvs.Am.S.) Lg. rais. f. Am. rais. u.
67-22. (St.) Lg. rais. f., carry. s. & lower., with Am. rais. f., part. & lower.
68-22. (St.) Lg. rais. s. & carry. b., with Am. rais. s & u.
69-23. (St.-1 Low Hn.Hp.-1 Am.U.) Tr. lower. s. with Lg. rais.

NINTH YEAR (AGE 17).

- 70-22. (St.) Lg. rais. f. & carry. s., with Am. rais. f. & u.
71-22. (St.) Lg. rais. f. & carry. s. & b., with Am. rais. f., s. & u.

(iii) *Balance Marching.*

FIRST YEAR (AGE 9).

- 72-24. March on the toes along a line ; at signal turn about (free).

SEVENTH YEAR (AGE 15).

- 73-25. Low march.

EIGHTH YEAR (AGE 16).

- 74-26. Slow march with hi. Kn. rais. & Lg. stretch. f.

(iv) *Balance Lunge Position.*

SEVENTH YEAR (AGE 15).

- 75-27. (St.-Toe Ln.-Hn.Hp.) Lg. rais. b.

EIGHTH YEAR (AGE 16).

- 76-28. (St.-Toe B.-Hn.Hp.) Lg. rais. b. to Bal. Ln. posn.

NINTH YEAR (AGE 17).

- 77-29. (St.-Toe B.-Am.S.) Advancing with Bal. lung. (Later with Am. rais.u.).

III. EXERCISES ON APPARATUS.

- (i) *Mounting to Balance Standing, and Exercises while Standing on one or both Legs.*

FIRST YEAR (AGE 9).

- 78-30. (Sd.St.) Step up to Bal. St. ; jump down s. or f. (Bench or beam below & later at knee height).
79-30. (St.-Asd. of Beam) Step up to Bal. St. ; jump down with one or both hands on beam. (Beam from knee height to hip height). [Later, the S.P. to be Hi.Asd.Sit.].

BALANCE EXERCISES.

SECOND YEAR (AGE 10).

- 80-30. (Fr.St.-Ft.Rst.) Step up to Ac. Bal. St., jump. down f. or b.
(Bench-rib or low beam).

THIRD YEAR (AGE 11).

- 81-30. (Sd.St.) Step up on round side of beam.
82-31. (Bal.St.) Kn. bend. (later, Kn.fl. bend.).
83-32. (Bal.St.) Kn. rais.
84-33. (Bal.St.) Turning 90°, later 180°.

FOURTH YEAR (AGE 12).

- 85-34. (Hi.Hz.Knl.) Head wrestling. (Low beam).

FIFTH YEAR (AGE 13).

- 86-30. (Bal.Sup.) Rising to Bal. St. (Beam between hip & chest height).
87-30. (Fr.St.-Ur.Hv.Gr.) Circl. up & rise to Bal. St.; jump down.
(Beam at chest height).

SEVENTH YEAR (AGE 15).

- 88-35. (Bal.St.) Toe Ln. b.

EIGHTH YEAR (AGE 16).

- 89-30. (Fr.St.) Circl. up & rise to Bal. St.; circl. down. (Beam at head height or above).
90-35. (Bal.St.-Toe.Ln.-Hn.Hp.[Am.S.][Am.U.]) Lg. rais. b. to Bal. Ln. posn.

NINTH YEAR (AGE 17).

- 91-32. (Bal.St. [-Am.U.]) Kn. rais. & Lg. stretch. b. (f.) (f. & b.).
92-35. (Bal.St.-Am.S.) Lg. rais. b. to Bal. Ln. posn.
(ii) *Balance Marches and Running on Sloping Bench.*

FIRST YEAR (AGE 9).

- 93-36. Bal. march. f. (b.), arms free. (Bench-rib, or beam not above knee height).
94-37. Bal. march. f. with Ak. stretch.

THIRD YEAR (AGE 11).

- 95-36. Bal. march. f., & at mid beam turn 90° & jump down.
96-36. Bal. march. f. up (later also down) sloping bench-rib. (Later on see-saw bench).
97-44. Run. u. & d. sloping bench-top. (Bench on wall bars).

BALANCE EXERCISES.

FOURTH YEAR (AGE 12).

- 98-36. Bal. march. alt. f. & b., turn. about at each step. (practice first along bench-top).
 99-38. Bal. march. f. with slight Kn. bend. & Ft. carry. along side of beam.
 100-39. Bal. march. f. with dropping on one knee.
 101-44. Run. u., turn., & run. d. sloping bench-top (turn at first half-way up).

FOURTH TO NINTH YEARS (AGES 12 TO 17).

- 102-36. Bal. march. f. on round side of beam. (Beam right down).
 103-36. Bal. march. f. & b. with arms in Hn. Hp. & higher posns.

FIFTH YEAR (AGE 13).

- 104-40. Bal. march. b. with Kn. rais. & Lg. stretch. b.

SIXTH YEAR (AGE 14).

- 105-41. Bal. march. f. with Kn. rais. & Lg. stretch. f.

EIGHTH YEAR (AGE 16).

- 106-42. Bal. march. with 1 Kn. bend., 1 Lg. rais. f., & Am. rais. f.

NINTH YEAR (AGE 17).

- 107-43. Bal. march. with 1 Kn. fl. bend. & Am. rais. f.

Note.—The leg and arm movements in Exs. 106 and 107 should be practised first without marching.

(iii) *Exercises from Side Sitting Position.*

SECOND YEAR (AGE 10).

- 108-45. (Sd. Sit.) Turn. to Sit. posn. & back again. (Beam at hip height).

THIRD YEAR (AGE 11).

- 109-46. (Bal. Sup.) Turn. to Sd. Sit. posn. between hands. (Beam low at first).

SEVENTH YEAR (AGE 15).

- 110-47. (Sd. Sit.) Lg. swing. over beam to Asd. Sit. posn.
 111-48. (Sd. Sit.) Lg. swing. over beam to Sd. Sit. on opposite side. (Beam low at first).

EIGHTH YEAR (AGE 16).

- 112-49. (Bal. Sup.) Moving along beam by turn. to Sd. Sit. between hands.

NINTH YEAR (AGE 17).

- 113-50. (Bal. Sup.) Turn. to Sd. sit. outside hands, later with moving along beam. (Beam low at first).

ABDOMINAL EXERCISES.

TYPES.

- I. Game forms.
 - II. Knee and Leg raising :—
 - (i) in Back Lying position.
 - (ii) in the St.-Bk.Rst.-U.Gr. and the Hg.-Bk.Rst. positions.
 - III. Exercises in the Sit. and the Sit.-Kn.Ra. positions.
 - IV. Front Support.
 - V. Trunk lowering backwards :—
 - (i) in Sit.-Fxd., Hg.Sit.-Fxd., Sit.-Kn.Ra.-Fxd., and Knl.Sit. positions.
 - (ii) in St.-Fxd.F. position.
-

I. GAME FORMS.

FIRST YEAR (AGE 9).

- 1-41. Bear walk.
- 2-42. Crab walk.

SECOND YEAR (AGE 10).

- 3-43. Wheelbarrows.
- 4-44. Pushing contest.
- 5-43. Wheelbarrow race (short).

THIRD YEAR (AGE 11).

- 6-45. Pushing wrestle.

FOURTH YEAR (AGE 12).

- 7- 1. Lift the sack.
- 8-43. Empty wheelbarrows.

FIFTH YEAR (AGE 13).

- 9-45. Pushing contest (arms sideways and fingers interlaced).

II. KNEE AND LEG RAISING.

(i) *In Back Lying Position.*

FIRST YEAR (AGE 9).

- 10- 2. (Bk.Ly.-Kn.Ra.) Kn. rais. to chest.
- 11- 5. (Bk.Ly.-Hi.Kn.Ra.) Lg. stretch. u. (palms of hands on floor).
- 12- 3. (Bk.Ly.-Kn.Ra.) Lg. rais. over head to touch floor.
- 13- 4. (Bk.Ly.-Kn.Ra.-U.Gr.) Lg. rais. to fix feet asd. (Wall bars).
- 14- 7. (Bk.Ly.-Kn.Ra.-Am.U.) Cycling.
- 15- 8. (Bk.Ly.-Kn.Ra.) Thunder.

ABDOMINAL EXERCISES.

SECOND YEAR (AGE 10).

- 16- 9. (Bk.Ly.-Am.U.) 1 Lg. rais. to 45°.
 17- 9. (Bk.Ly.-Am.U.) 1 Lg. rais. to 90°.
 18- 6. (Bk.Ly.-Hi.Lg.Ra.-Fxd.-U.Gr.) Lg. stretch. (Wall bars).

THIRD YEAR (AGE 11).

- 19-10. (Bk.Ly.-Nk.Rst.) Lg. rais. to 90° with Kn. bend. & stretch.

FIFTH YEAR (AGE 13).

- 20-11. (Bk.Ly.-Am.U.Clp.-Lg.Ra.) Lg. swing. d. with Tr. rais. to Hz.
 Sit. posn.
 21-12. (Bk.Ly.-Am.S.Clen.) Kn. rais., Lg. stretch. to 45° & lower.

SIXTH YEAR (AGE 14).

- 22-13. (Bk.Ly.-Nk.Rst.) Lg. rais. to 90° (legs straight).

SEVENTH YEAR (AGE 15).

- 23-13. (Bk.Ly.-Am.U.) Lg. rais. to 45°.

EIGHTH YEAR (AGE 16).

- 24-13. (Bk.Ly.-Am.U.) Lg. rais. slightly.

(ii) *In St.-Bk.Rst.-U.Gr., and in Hg.-Bk.Rst. positions.*

SECOND YEAR (AGE 10).

- 25-14. (St.-Bk.Rst.-U.Gr.) Cycling. (Wall bars).
 26-16. (St.-Bk.Rst.-U.Gr.) 1 Kn. rais. (Wall bars).

THIRD YEAR (AGE 11).

- 27-17. (St.-Bk.Rst.-U.Gr.) Kn. rais. high. (later rhyth.). (Wall bars).
 28-15. (Hg.-Bk.Rst.) Cycling. (Wall bars).
 29-16. (Hg.-Bk.Rst.) 1 Kn. rais. (quickly). (Wall bars).

FOURTH YEAR (AGE 12).

- 30-22. (Hg.-Bk.Rst.) Alt. Kn. rais. (quickly 1-2).
 31-17. (Hg.-Bk.Rst.) Kn. rais. high.

FIFTH YEAR (AGE 13).

- 32-18. (St.-Bk.Rst.-U.Gr.) 1 Kn. rais. & Lg. stretch. f.
 33-23. (Hg.-Bk.Rst.-Kn.Ra.) Kn. part.

SIXTH YEAR (AGE 14).

- 34-19. (St.-Bk.Rst.-U.Gr.) Kn. rais. & alt. Lg. stretch. f.
 35-20. (St.-Bk.Rst.-U.Gr.) Kn. rais. & Lg. stretch. f.
 36-24. (Hg.-Bk.Rst.) Kn. rais. & Lg. swing. u.

ABDOMINAL EXERCISES.

SEVENTH YEAR (AGE 15).

- 37-25. (Hg.-Bk.Rst.) Kn. rais., Lg. stretch. f. & lower.
38-19. (Hg.-Bk.Rst.-Kn.Ra.) Alt. Lg. stretch.

EIGHTH YEAR (AGE 16).

- 39-21. (Hg.-Bk.Rst.-Kn.Ra.) Lg. stretch.
40-26. (Hg.-Bk. Rst.) Lg. rais.

NINTH YEAR (AGE 17).

- 41-27. (Hg.-Bk.Rst.-Hi.Lg.Ra.-Fxd.) Lg. stretch. (Wall bars).
42-23. (Hg.-Bk.Rst.-Lg.Ra.) Lg. part.
43-28. (Hv.Hg.-Bk.Rst.) Kn. rais. &c. (also with Tr. lower.).

(iii) *Exercises in the Sit., Sit.-Kn.Ra., and Bk.Ly.-Kn.Ra. Positions.*

FIRST YEAR (AGE 9).

- 44-29. (Hz.Sit.) Tr. bend. f. to grasp feet.

THIRD YEAR (AGE 11).

- 45-30. (Hz.Sit.-Kn.Ra.-Ft.Rst.-Tr.F.-F.Gr.) Alt. Lg. stretch. (free).
(Wall bars).

FOURTH YEAR (AGE 12).

- 46-31. (Hz.Sit.-Kn.Ra.Op.-Ak.Gr.) Lg. stretch. (later, grasp feet near toes).
47-32. (Hz.Sit.-Ft.Rst.) Tr. bend. d. to grasp feet or lowest wall bar.
48-33. (Hz.Sit.-Asd.) Tr. bend. d. to grasp feet.

FIFTH YEAR (AGE 13).

- 49-34. (Hz.Sit.-Tr.D.-Ft.Gr.) Hl. lift. with hands.
50-37. (Bk.Ly.-Kn.Ra.Op.-Fxd.-Hn.Hp.) Tr. swing. u. & bend. d.
(Wall bars).
51-38. (Bk.Ly.-Kn.Ra.-Am.S.) Tr. swing. u. & bend. d. with Lg.
stretch. to grasp feet.
52-39. (Bk.Ly.-Kn.Ra.-Am.U.Clp.) Tr. swing. u. & bend. d. with Lg.
stretch.

SIXTH YEAR (AGE 14).

- 53-35. (Hz.Sit.-1 Kn.S.-Ft.Gr.-Tr.D.) Tr. press. d.

EIGHTH YEAR (AGE 16).

- 54-36. (Hz.Sit.-Asd.-Ak.Gr.-Tr.D.) Tr. press. d. (:).
55-40. (Bk.Ly.-Lg.Ra.-Ft.Rst.-Am.U.Clp.) Tr. rais. & bend. d. to
grasp bar. (Wall bars).

NINTH YEAR (AGE 17).

- 56-30. (Hz.Sit.-Kn.Ra.-Ft.Rst.-Tr.F.-F.Gr.) Lg. stretch. (Wall bars).

IV. EXERCISES IN FRONT SUPPORT POSITION.

FIRST YEAR (AGE 9).

- 57-46. (St.-Crh.) Alt. Lg. stretch. b.
 58-47. (Bt.Fr.Sup.-Wd.Asd.) 1 Hn. touch knee, head, &c.
 59-48. (Hi.Fr.Sup.) Ft. plac. f. with straight knees. (Beam, bench).
 60-49. (Hi.Fr.Sup.) Alt. Ft. plac. f.
 61-50. (Hz.Knl.) Quick Lg. stretch.

SECOND YEAR (AGE 10).

- 62-51. (Bt.Fr.Sup.) Lg. kick, u.
 63-52. (Bt.Hi.Fr.Sup.) Lg. kick. u., later with Lg. part. in air. (Bench).
 64-60. Low Fr. Sup. posn., free form. (Wall bars).

THIRD YEAR (AGE 11).

- 65-56. (Hi.Fr.Sup.) Am. bend. (Beam, later bench).
 66-57. (Hi.Fr.Sup.-Asd.) 1 Am. rais. f. & u. (Beam or bench).
 67-59. (Hi.Fr.Sup.) 1 Lg. rais. (Beam or bench).

FOURTH YEAR (AGE 12).

- 68-53. (St.-Crh.) Run. f. on hands to Fr. Sup. posn.
 69-55. (Fr. Sup.) Walk round with feet (free form).
 70-55. (Fr.Sup.) Walk s. with hands and feet.
 71-61. (Low Fr.Sup.) Hd. turn.
 72-61. (Low Fr.Sup.) 1 Hn. lift. (Wall bars).
 73-61. (Low Fr.Sup.) Ft. moving up wall bars to Hn. St.-Fr. Rst. posn.
 (Wall bars).

FIFTH YEAR (AGE 13).

- 74-55. (Fr.Sup.) Walk round with hands.
 75-54. (St.-Crh.) Lg. throw. b. to Fr. Sup. posn.

SIXTH YEAR (AGE 14).

- 76-59. (Fr.Sup.) 1 Lg. rais.
 77-55. (Fr.Sup.) Ft. plac. asd. with jump.

SEVENTH YEAR (AGE 15).

- 78-57. (Fr.Sup.-Asd.) Plac. 1 Hn. on hip.
 79-57. (Fr.Sup.-Asd.) 1 Am. rais. f. & u.

EIGHTH YEAR (AGE 16).

- 80-56. (Fr.Sup.) Am. bend.
 81-56. (Hz.Fr.Sup.) Am. bend. (Bench, beam, wall bars).

ABDOMINAL EXERCISES.

NINTH YEAR (AGE 17).

- 82-56. (Bt.Fr.Sup.-Wd.Asd.) Am. bend.
- 83-59. (Fr.Sup.) Am. bend. with 1 Lg. rais.
- 84-58. (Fr.Sup.-Asd.) Jump. (Later, also with clap. hands & feet).
- 85-59. (Fr.Sup.-1 Lg.Ra.) Am. bend.

V. TRUNK LOWERING BACKWARDS.

(i) *In Sit.-Fxd., Hz.Sit.-Fxd., Sit.-Kn.Ra.-Fxd., and Knl.Sit. Positions.*

FOURTH YEAR (AGE 12).

- 86-62. (Sit.-Fxd.-Hn.Hp.) Tr. lower. b. slightly, & later to 45°
(at first lower. & rais. in rhythm with breathing, the hands
grasping edge of bench). (Bench).
- 87-62. (Sit.-Fxd.-U.Bd.) Tr. lower. b. to 45°. (Bench).

FIFTH YEAR (AGE 13).

- 88-62. (Sit.-Fxd.-Hd.Rst.) Tr. lower. b., at first slightly, then to 45°.
(Bench).

SIXTH YEAR (AGE 14).

- 89-63. (Sit.-Fxd.-Hn.Hp.) Tr. lower. b. to 90°. (Bench).
- 90-62. (Sit.-Fxd.-U.Bd.) Tr. lower. b. to 90°. (Bench).
- 91-64. (Hz.Sit.-Fxd.-Hn.Hp.) Tr. lower. b. to 90°.
- 92-65. (Hz.Sit.-Kn.Ra.Op.-Fxd.-U.Bd.) Tr. lower. b. to 45° or 90°.

SEVENTH YEAR (AGE 15).

- 93-62. (Sit.-Fxd.-Hd.Rst.) Tr. lower. b. to 90°. (Bench).
- 94-66. (Sit.-Fxd.-Hn.Hp.-Tr.B.) Am. chang. to U.Bd. (Bench).
- 95-62. (Hz.Sit.-Fxd.-U.Bd.) Tr. lower. b. to 90°.
- 96-65. (Hz.Sit.-Kn.Ra.Op.-Fxd.-Hd.Rst.) Tr. lower. b. to 45°.
- 97-68. (Knl.Sit.) Tr. lower. b. with Am. rais. s. to rest Hd. & Hn. on
floor. (:).

EIGHTH YEAR (AGE 16).

- 98-62. (Sit.-Fxd.-Am.U.) Tr. lower. b. to 45°. (Bench).
- 99-67. (Sit.-Fxd.-U.Bd.-Tr.B.) Am. stretch. s. (Bench).
- 100-62. (Hz.Sit.-Fxd.-Hd.Rst.) Tr. lower. b. to 90°.
- 101-65. (Hz.Sit.-Kn.Ra.Op.-Fxd.-Am.U.) Tr. lower. b. to 90° (Hn.Hp.
or U.Bd. posn. can be taken before raising the trunk).
- 102-67. (Hz.Sit.-Kn.Ra.Op.-Fxd.-U.Bd.-Tr.B.) Am. stretch. s.

NINTH YEAR (AGE 17).

- 103-67. (Sit.-Fxd.-U.Bd.-Tr.B.) Am. stretch. u. (Bench).
- 104-67. (Hz.Sit.-Fxd.-U.Bd.-Tr.B.) Am. stretch. s.

ABDOMINAL EXERCISES.

- 105-67. (Hz.Sit.-Fxd.-U.Bd.-Tr.B.) Am. stretch. u.
106-62. (Sit.-Fxd.-Am.U.) Tr. lower. b. to 90°. (Bench).
107-67. (Hz.Sit.-Kn.Ra.Op.-Fxd.-U.Bd.-Tr.B.) Am. stretch. u.
108-65. (Hz.Sit.-Kn.Ra.Op.-Fxd.-Am.U.) Tr. lower. b.

(ii) *In St.-Fxd.F. Position.*

SEVENTH YEAR (AGE 15).

- 109-69. (St.-Fxd.F.-Hn.Hp.) Tr. lower. b. (Wall bars).
110-69. (St.-Fxd.F.-U.Bd.) Tr. lower. b. (Wall bars).

EIGHTH YEAR (AGE 16).

- 111-69. (St.-Fxd.F.-Nk.Rst.) Tr. lower. b. (Wall bars).
112-69. (St.-Fxd.F.-Am.U.) Tr. lower. b. (Wall bars).

NINTH YEAR (AGE 17).

- 113-70. (St.-Fxd.F.-U.Bd.-Tr.B.) Am. stretch. s. (Wall bars).
114-70. (St.-Fxd.F.-U.Bd.-Tr.B.) Am. stretch. u. (Wall bars).
115-72. (St.-Fxd.F.-Hn.Hp.) Tr. lower. b. *with* 1 Kn. bend. (Wall bars).
116-71. (St.-Fxd.F.-Am.U.-Tr.B.) Am. swing. f. & u. (Wall bars).

LATERAL EXERCISES.

TYPES.

- I. Game forms.
- II. Trunk turning.
- III. Trunk bending sideways :—
 - (i) in St. position.
 - (ii) in Sd. St.-Fxd. position.
- IV. Trunk lowering sideways.
- V. Side support.
- VI. Exercises in Lunge Outward position.

I. GAME FORMS.

FIRST YEAR (AGE 9).

- 1-16. Tug-of-war with one hand (pull back to wall).
2-17. Tug-of-war in ranks.
3-18. Rabbit hop sideways.

SECOND YEAR (AGE 10).

- 4-16. Tug-of-war with linked elbows.
5-19. Kick the hand sideways.

LATERAL EXERCISES.

THIRD YEAR (AGE 11).

- 6-16. Tug-of-war with one hand (between 2 lines).

FIFTH YEAR (AGE 13).

- 7- 1. Grind Coffee.

SIXTH YEAR (AGE 14).

- 8-20. Wheelbarrow that will not go.

II. TRUNK TURNING.

FIRST YEAR (AGE 9).

- 9- 2. (St.-Asd.) Tr. & Hd. turn.
10- 3. (St.-Asd.-Hn.Hp.) Quick Tr. turn. from s. to s.

SECOND YEAR (AGE 10).

- 11- 3. (St.-Asd.-Hn.Hp.) Slow Tr. turn. from s. to s.
12- 6. (St.-Asd.-U.Bd.Clen.) Quick Tr. turn. with alt. Am. punch. f.
13- 4. (St.-Asd.-Hd.Rst.) Tr. turn.

THIRD YEAR (AGE 11).

- 14- 3. (St.-Asd.-Hd.Rst.) Tr. turn. from s. to s.
15- 4. (St.-Asd.-Am.S.) Tr. turn.

FOURTH YEAR (AGE 12).

- 16- 5. (St.-Ft.F.-Hn.Hp.) Tr. turn.
17- 5. (St.-Ft.F.-Hd.Rst.) Tr. turn.
18- 7. (St.-Asd.-Am.S.Clen.) Quick Tr. turn. from s. to s. with alt. Am. swing. ac.
19- 8. (Hz.Knl.) 1 Am. swing. s. with Tr. & Hd. turn. (1-4).
20- 9. (St.-Asd.-Am.D.-Tr.F.) Alt. Am. swing. s. with Tr. & Hd. turn. (1-2, later rhyth. from s. to s.).

FIFTH YEAR (AGE 13).

- 21-10. (St.-Asd.-Ac.Bd.) Quick Tr. turn. with Am. fling.
22-15. (St.-Asd.-Hn.Hp.-Tr.Tn.) Am. chang. to Hd. Rst.
23-15. (St.-Asd.-U.Bd.-Tr.Tn.) Am. stretch. s.
24-15. (St.-Asd.-Ac.Bd.-Tr.Tn.) Am. chang. to Hd. Rst.

SIXTH YEAR (AGE 14).

- 25-15. (St.-Asd.-Am.S.Clen.-Tr.Tn.) Am. fling.
26-11. (St.-Wd.Asd.-Ac.Bd.Clp.) Rhyth. quick Tr. turn. from s. to s. with El. swing.
27-12. (St.-Wd.Asd.-F.Bd.) Quick Tr. turn. with 1 Am. fling.

LATERAL EXERCISES.

SEVENTH YEAR (AGE 15).

- 28-13. (St.-Asd.-1 Hn.Hp.-1 Am.C.) Quick Tr. turn. with 1 Am. swing. m.
29-14. (St.-Asd.-U.Bd.) Quick Tr. turn. with Am. stretch. u.
30-15. (St.-Asd.-U.Bd.-Tr.Tn.) Am. stretch. u.
31- 4. (St.-Asd.-Am.U.) Tr. turn.
32- 5. (St.-Ft.F.-Am.U.) Tr. turn.

EIGHTH YEAR (AGE 16).

- 33-14. (St.-Asd.-U.Bd.) Tr. turn. with slow Am. stretch. u.
34-14. (St.-Asd.-U.Bd.) Tr. turn. with Am. stretch. u. (slow Tr. turn. s. with Am. stretch. u., quick Tr. turn. f. with Am. bend.).
35-15. (St.-Ft.F.-Ac.Bd.-Tr.Tn.) Am. fling.

NINTH YEAR (AGE 17).

- 36-15. (St.-Ft.F.-U.Bd.-Tr.Tn.) Am. stretch. u.

III. TRUNK BENDING SIDEWAYS.

(i) *In St.-Asd., St., St.-Ft.Cl., and St.-Ft.F. Positions.*

FIRST YEAR (AGE 9).

- 37-21. (St.-Asd.) Tr. bend. d. to grasp 1 ankle.
38-24. (St.-Asd.-Hn Hp.) Tr. bend. s.
39-22. (St.-Asd.) Quick Tr. bend. d. to touch opp. foot.
40-26. (St.-Asd.) Tr. bend. s. to touch floor, with opp. Hl. rais.
41-24. (St.-Hn.Hp.) Tr. bend. s.
42-23. (St.-Asd.-1 Hd.Rst.) Tr. bend. s. to touch knee.

SECOND YEAR (AGE 10).

- 43-27. (St.-Asd.-Hn.Hp.) Tr. bend. s. with opp. Hl. rais.
44-24. (St.-Asd.-Am.S.) Quick Tr. bend. s., free form.
45-24. (St.-Asd.-Hd.Rst.) Tr. bend. s.
46-27. (St.-Asd.-Hn.Hp.) Tr. bend. from s. to s., with opp. Hl. rais.
47-25. (St.-Asd.) Rhyth. quick Tr. bend. from s. to s.
48-21. (St.-Asd.) Tr. bend. d. to grasp 1 Ak., & rhyth. Tr. press. d.

THIRD YEAR (AGE 11).

- 49-25. (St.-Asd.-Low.Hn.Hp.) Rhyth. quick Tr. bend. from s. to s.
50-27. (St.-Asd.-Hd.Rst.) Tr. bend. s. with opp. Hl. rais.
51-26. (St.-Asd.) Tr. bend. s. to place palm on floor, with opp. Hl. rais.
(free form, slow or quick.)

LATERAL EXERCISES.

FOURTH YEAR (AGE 12).

- 52-25. (St.) Rhyth. quick Tr. bend. from s. to s.
53-24. (St.-Hd.Rst.) Tr. bend. s.
54-24. (St.-Asd.-Am.S.) Quick Tr. bend. s.
55-26. (St.-Asd.-Am.S.) Tr. bend. s. to touch floor.
56-27. (St.-Asd.-Am.S.) Tr. bend. s. with opp. Hl. rais.

FIFTH YEAR (AGE 13).

- 57-27. (St.-Asd.-Am.S.) Quick Tr. bend. from s. to s. (Later, rhyth.).
58-24. (St.-Am.S.) Tr. bend. s.
59-27. (St.-Asd.-Low Hn.Hp.) Rhyth. quick Tr. bend. from s. to s.
with opp. Hl. rais.

SIXTH YEAR (AGE 14).

- 60-24. (St.-Ft.Cl.-1 Hd.Rst.) Tr. bend. s.
61-25. (St.-Asd.-Hd.Rst.) Tr. bend. from s. to s. (later, rhyth.).

SEVENTH YEAR (AGE 15).

- 62-28. (St.-Asd.-1 Hn.Hp.) Tr. bend. s. & rhyth. press.
63-24. (St.-Ft.Cl.-Ac.Bd.) Tr. bend. s.
64-25. (St.-Asd.-Ac.Bd. [Am.S.]) Rhyth. quick Tr. bend. from s. to s.

EIGHTH YEAR (AGE 16).

- 65-24. (St.-Asd.-Am.U.) Tr. bend. s.
66-24. (St.-Ft.F.-Hn.Hp.) Tr. bend. s.
67-29. (St.-Wd.Asd.-Hn.Hp.) Rhyth. Tr. bend. s. with opp. Kn. bend.
68-29. (St.-Wd.Asd.-1 Hd.Rst.-1 Hn.Hp.) Rhyth. Tr. bend. s. with
opp. Kn. bend.

NINTH YEAR (AGE 17).

- 69-28. (St.-Asd.-1 Hn.Hp.-1 Nk.Rst.) Tr. bend. s. & rhyth. press.
70-24. (St.-Ft.F.-Nk.Rst.) Tr. bend. s.
71-28. (St.-Asd.-1 Hn.Hp.-1 Am.U.Clen.) Tr. bend. s. & rhyth. press.
72-29. (St.-Asd.Clen.) Rhyth. quick Tr. bend. from s. to s. with alt.
Am. punch. over head & behind back.
73-30. (St.-Wd.Asd.-Hd.Rst. [1 Hn.Hp.-1 Am.U.Clen.]) Rhyth. Tr.
bend. s. with opp. Kn. bend.
74-30. (St.-Asd.-1 Low Hn.Hp.-1 Hd.Rst.) Tr. bend. s. & rhyth. press.

(ii) *In Sd.St.-Fxd. Position.*

THIRD YEAR (AGE 11).

- 75-31. (Sd.St.-Ft.Rst.) Tr. bend. d. to grasp raised ankle. (Bench or
beam).
76-32. (Sd.St.-Ft.Rst.-Hn.Hp.) Tr. bend. s. towards raised foot.
(Bench or beam).

LATERAL EXERCISES.

FOURTH YEAR (AGE 12).

- 77-31. (Sd.St.-Fxd.) Tr. bend. d. to grasp ankle. (Wall bars).
78-32. (Sd.St.-Fxd.-Low Hn.Hp.) Rhyth. quick Tr. bend. from s. to s. (Wall bars).

FIFTH YEAR (AGE 13).

- 79-32. (Sd.St.-Fxd.-Hn.Hp.) Tr. bend. to both s. (Wall bars).
80-32. (Sd.St.-Ft.Rst.-Hn.Hp.) Tr. bend. to both s. (Bench or beam).

SIXTH YEAR (AGE 14).

- 81-32. (Sd.St.-Fxd.-Hd.Rst.) Tr. bend. to both s. (Wall bars).
82-32. (Sd.St.-Ft.Rst.-Hn.Hp.) Tr. bend. from s. to s. (Bench or beam).
83-32. (Sd.St.-Fxd.-Ac.Bd.) Tr. bend. from s. to s. (Bench or beam).

SEVENTH YEAR (AGE 15).

- 84-32. (Sd.St.-Ft.Rst.-Hd.Rst.) Tr. bend. from s. to s. (Bench or beam).
85-33. (Sd.St.-Fxd.-Ac.Bd.-Tr.S.) Am. fling. (Wall bars).
86-33. (Sd.St.-Fxd.-U.Bd.-Tr.S.) Am. stretch. u. (Wall bars).
87-32. (Sd.St.-Ft.Rst.-Am.S.Clen.) Tr. bend. s. towards raised foot. (Bench or beam).
88-32. (Sd.St.-Fxd.-1 Low Hn.Hp.) Tr. bend. s. & rhyth. press. (to both sides). (Wall bars).

EIGHTH YEAR (AGE 16).

- 89-32. (Sd.St.-Fxd.-Am.U.) Tr. bend. to both s. (Wall bars).
90-32. (Sd.St.-Fxd.-Ac.Bd.) Rhyth. quick Tr. bend. from s. to s. (Wall bars).
91-32. (Sd.St.-Fxd.-1 Low Hn.Hp.-1 Hd.Rst.) Tr. bend. s. & rhyth. press. (to both sides). (Wall bars).

NINTH YEAR (AGE 17).

- 92-32. (Sd.St.-Fxd.-1 Hn.Hp.-1 Nk.Rst.) Tr. bend. s. & Rhyth. press. (to both sides). (Wall bars).
93-32. (Sd.St.-Fxd.-1 Low Hn.Hp.-1 Am.U.Clen.) Tr. bend. s. & rhyth. press. with punch. over head (to both sides). (Wall bars).

IV. TRUNK LOWERING SIDEWAYS.

SIXTH YEAR (AGE 14).

- 94-35. (Sd.St.-Th.Rst.-Hn.Hp.) Tr. lower, s. with Lg. rais. (Beam).
95-34. (St.) Quick Tr. lower, s. with Lg. rais.
96-34. (St.-Hn.Hp.) Tr. lower, s. with Lg. rais. (with pause in s. posn.).
97-34. (St.-Hn.Hp.) Quick Tr. lower s. with Lg. rais. (with pause in s. posn.).

LATERAL EXERCISES.

SEVENTH YEAR (AGE 15).

- 98-34. (St.) Quick Tr. lower. s. with Lg. rais. & Am. swing. s.
99-35. (Sd.St.-Th.Rst.-1 Am.U.-1 Hn.Hp.) Tr. lower. s. with Lg. rais. (Beam).
100-35. (Sd.St.-Th.Rst.-Hd.Rst.) Tr. lower. s. with Lg. rais. (Beam).

EIGHTH YEAR (AGE 16).

- 101-35. (Sd.St.-Th.Rst.-Am.U.) Tr. lower. s. with Lg. rais. (Beam).
102-36. (Sd.St.-Am.U.) Tr. lower. s. with Lg. rais., to grasp wall bars.

NINTH YEAR (AGE 17).

- 103-37. Sideways holding.

V. SIDE SUPPORT.

THIRD YEAR (AGE 11).

- 104-38. (Hi.Sd.Sup.) Am. rais. & grasp. (Bench & wall bars).

FOURTH YEAR (AGE 12).

- 105-38. (Hi.Sd.Sup.-U.Gr.) Lg. rais. (Bench & wall bars).
106-38. (Hi.Sd.Sup.-Am.U.) Lg. rais. (Bench or beam).

SIXTH YEAR (AGE 14).

- 107-39. (Fr.St.-Crh.-1 F.Gr.) Taking Sd. Sup. posn. (Wall bars.)
108-40. (St.-Crh.) Taking Sd. Sup. posn. (Introduced from Hz.Sit.-Asd. posn.).
109-40. (Sd.Sup.-Hn.Hp.) Lg. rais.

SEVENTH YEAR (AGE 15).

- 110-41. (Sd.Sup.-Hn.Hp.) Hp. rais.

EIGHTH YEAR (AGE 16).

- 111-40. (Sd.Sup.-U.Bd.) Am. stretch. u.
112-40. (Sd.Sup.-Am.U.) Lg. rais.

NINTH YEAR (AGE 17).

- 113-40. (Sd.Sup.-U.Bd.) Lg. rais. with Am. stretch. u.
114-40. (Sd.Sup.-U.Bd.-Lg.Ra.) Am. stretch. u.

VI. EXERCISES IN LUNGE OUTWARD POSITION.

SECOND YEAR (AGE 10).

- 115-42. Warlike lunge outward.

SIXTH YEAR (AGE 14).

- 116-43. (St.-Ln.O.-U.Bd.) Alt. Am. stretch. u.
117-43. (St.-Ln.O.-1 Am.U.-1 Am.B.) Am. chang. with stretch. or swing.

LATERAL EXERCISES.

SEVENTH YEAR (AGE 15).

- 118-44. (St.-Ft.Fl.Op.-U.Bd.) Lung. o. with alt. Am. stretch. u. & b.
119-45. (St.-Ft.Fl.Op.) Lung. o. & touch floor.

EIGHTH YEAR (AGE 16).

- 120-44. (St.-Ft.Fl.Op.-U.Bd.) Moving f. by lung. o., with alt. Am. stretch. u. & b.
121-46. (St.-Ln.O.-Hn.Hp.) Tr. turn.

NINTH YEAR (AGE 17).

- 122-47. (St.-Ln.O.-U.Bd.-Tr.Tn.) Am. stretch. s. (u.).

MARCHING EXERCISES.

FIRST YEAR (AGE 9).

- 1- 1. Mark time.
2- 2. Rapid march in large circle ; instant halt on command.
3- 3. March with instant turning about on signal.
4- 4. March with varying speeds.
5- 5. March, and stop instantly in named position on signal.
6- 6. March with clap of hands (*a*) at each step, (*b*) at each step with left or right foot, (*c*) with four steps, four claps, &c.
7- 7. March on the toes.
8- 8. March with long steps.
9- 9. March with 4 light steps and 4 heavy steps.

SECOND YEAR (AGE 10).

- 10-10. March with short steps.
11-11. Mark time and halt in 2 moves.
12-12. March and halt in 2 moves (C.C.).
13-13. March. f. & change direction to b.
14-14. March in groups (*a*) independently, (*b*) to team places, open order, &c.
15-15. Mark time forming 1 file from 2 files, and 2 files from 1 file.
16-16. March forming 1 file from 2 files, and 2 files from 1 file.

THIRD YEAR (AGE 11).

- 17-17. Mark time increasing and decreasing intervals.
18-18. March increasing and decreasing intervals.
19-19. March with combinations of steps, e.g. skip step, astride jump.
20-20. March, and assume various positions on halting.
21-21. Mark time with Kn. rais.
22-22. March with Kn. rais.
23-23. March with turning about in 4 moves.

MARCHING EXERCISES.

FOURTH YEAR (AGE 12).

- 24-24. March & halt with turn. l. or r.
- 25-25. March with single change of step.
- 26-26. March s. on toes (rank or circle, with or without hands joined).
- 27-27. Hop march.
- 28-28. March backwards.
- 29-29. Slow march on toes f. & b.

FIFTH YEAR (AGE 13).

- 30-30. March & halt with turn. about.
- 31-31. March s. changing to f.
- 32-32. Slow march with Kn. rais. & Lg. stretch. f.

SIXTH YEAR (AGE 14).

- 33-33. March f. changing to s.
- 34-34. March with increasing and decreasing length of step (without altering rhythm.)

SEVENTH YEAR (AGE 15).

- 35-35. March with Lg. stretch.
- 36-36. March s. with turn. about.

LEAPING EXERCISES.

TYPES.

- I. Game forms.
- II. Rhythmic Jumps.
- III. Jumping :—
 - (i) Introductory Jumps.
 - (ii) High, Long, Hurdle, and Downward Jumps.
- IV. Vaulting.

I. GAME FORMS.

FIRST YEAR (AGE 9).

- 1- 1. Stepping stones.
- 2- 2. Rabbit hop.
- 3- 3. Jumping the brook.
- 4- 4. Ladder jump.
- 5- 5. Giant strides.
- 6- 6. Obstacle race (short jumps marked by lines for obstacles).

SECOND YEAR (AGE 10).

- 7- 7. War dance on the spot.
- 8- 8. Hopping race.
- 9- 9. Race with jumps off both feet together.
- 10-10. Jumping the yawning chasm.
- 11-11. Jumping the swinging rope.

II. RHYTHMIC JUMPS.

FIRST YEAR (AGE 9).

- 12-12. Asd. jump. (later, moving f., later still, with Am. swing. s.).
- 13-14. Skip jump. (later, moving f. & b. ; later still, moving alternately 4 counts to l. & 4 to r.).
- 14-14. Skip jump high and low. (later, with turn. l. (r.) at each high jump).
- 15-14. Skip jump, 4 on spot, 4 turning round about, and repeat turning opposite way, counting to 16.
- 16-14. Skip jump. f. to a line, then jump off both feet over marked space.

SECOND YEAR (AGE 10).

- 17-12. Asd. jump to 4 counts, skip jump to 4 counts, &c.
- 18-12. High Asd. jump.
- 19-12. Asd. jump with rebound at each landing.
- 20-12. Asd. jump moving f. to 8 counts, skip jump moving b. to 8 counts.
- 21-14. Skip jump, 3 low on spot, 3 high moving forward.
- 22-14. Skip jump high and low alternately, with quarter turn on each high jump (counting to 8).
- 23-14. Skip jump, 2 high with rebounds, 3 low and a rebound.
- 24-16. Tapping step.
- 25-17. Spring step.

THIRD YEAR (AGE 11).

- 26-12. Asd. jump, with quarter turn in the jump following each second count.
- 27-12. Asd. jump, with quarter turn in the jump following each fourth count.
- 28-12. Asd. jump moving f. to 8 counts & b. to 8 counts.
- 29-12. Asd. jump moving f., with rebound on each landing.
- 30-14. Skip jump, alternately high & low, moving f.
- 31-14. Skip jump moving f. to 8 counts & b. to 8 counts.
- 32-15. (St.-Kn.Fl.Bd.) Skip jump.
- 33-17. Spring step moving f.
- 34-17. Spring step, progressively higher to 8 counts.
- 35-18. Hopping with Kn. raised, 4 hops alternately on each foot.

LEAPING EXERCISES.

FOURTH YEAR (AGE 12).

- 36-13. (St.-Asd.) Jump with Hl. clicking, with rebound on landing.
- 37-12. High Asd. jump moving f.
- 38-14. Skip jump with rebound, and with quarter turn at each fourth jump.
- 39-14. Skip jump alternately to r. & l. with rebound.
- 40-14. Skip jump, moving sideways at each fourth jump.
- 41-14. Skip jump moving f. to 8 counts, Asd. jump moving b. to 8 counts.
- 42-19. (St.-Toe S.) Hop. with rebound on alt. Ft. & with Lg. swing. s. (later, moving f. or b.).

FIFTH YEAR (AGE 13).

- 43-12. Asd. jump, turning about in the jump following each fourth count.
- 44-15. (St.-Kn.Fl.Bd.-Hn.Hp.) Skip jump with quick Hd. turn.
- 45-20. Swinging step (on the spot, and moving f.).
- 46-21. (St.-Toe F.) Hop. with Ft. chang.
- 47-22. Hopping with Toe plac. f. & high Kn. rais. (Ft. chang. with hop).
- 48-16. Tapping step.

SIXTH YEAR (AGE 14).

- 49-12. Asd. jump moving f. to 8 counts with Am. swing. s.
- 50-12. Asd. jump with Kn. bend.
- 51-23. (St.-Toe S.) Hop. with Ft. chang.

SEVENTH YEAR (AGE 15).

- 52-20. Swinging step with 1 Am. swing. s. (m.). (Later, also with opp. Am. swing. f.).
- 53-24. Hopping with Kn. rais. & opp. Am. swing. f. (Later, also with the other Am. swing. s.).

III. JUMPING.

(i) *Introductory Jumps.*

FIRST YEAR (AGE 9).

- 54-26. U. jump, free form. (Later, several jumps consecutively).
- 55-26. (St.-F.Gr.) Free U. jump, landing in Kn. Fl. Bd. posn., repeated (Wall bars).
- 56-27. F. jump, free form. (Later, several jumps consecutively).
- 57-25. Prepare to jump. (T.C.).
- 58-25. Prepare to jump. (C.C.).

LEAPING EXERCISES.

SECOND YEAR (AGE 10).

- 59-26. U. jump, controlled form. (T.C.). (Later, several consecutive jumps in free time).
- 60-27. F. jump, controlled form. (T.C.).
- 61-26. U. jump. (C.C.).
- 62-26. U. jump with hand clap above head.

THIRD YEAR (AGE 11).

- 63-26. U. jump with Am. swing. s.
- 64-26. U. jump with Am. swing. f. & u.
- 65-26. U. jump with Am. swing. f. & d.
- 66-27. (St.-Ft.F.) F. jump.
- 67-27. One step & F. jump. (T.C. ; later C.C.).
- 68-27. Two steps & F. jump.
- 69-27. Three steps & F. jump.
- 70-27. Three steps & F. jump, land & jump u. off both feet (later, jump f. on landing, & later still, over a low rope).
- 71-27. "Seven Jumps."
- 72-27. "Seven Jumps," landing on last line with both feet & jumping f. into circle or over marked space, later over a low rope ; later still, Asd. vault to sit asd. horse lengthw.
- 72A-29. One step & S. jump.

FOURTH YEAR (AGE 12).

- 73-26. U. jump with Lg. swing. s. (later also with Am. swing. s.).
- 74-26. U. jump with quarter turn, later with half turn.
- 75-27. One step & F. jump with quarter turn.
- 76-27. Two (Three) steps & F. jump with quarter turn.

FIFTH YEAR (AGE 13).

- 77-28. B. jump.
- 78-26. Twice U. jump.
- 79-26. Twice U. jump with Lg. swing. s.
- 80-26. Twice U. jump with quarter turn in each jump ; later with half turn.

(ii) *High, Long, Hurdle and Downward Jumps.*

FIRST YEAR (AGE 9).

- 81-30. Run. Hi. jump, free form. (one at a time, later in pairs). (Rope very low).
- 82-30. Run. Hi. jump, free form, landing in a circle. (Rope very low).
- 83-35. Run. jumps from foot to foot over a row of 3 or 4 low objects (more can be added later).
- 84-33. Run. Long jump over marked space, free form.
- 85-36. (Hi.St.) D. jump off one foot, free form. (Bench).

LEAPING EXERCISES.

SECOND YEAR (AGE 10).

- 86-32. St. Hi. jump. free form, at first with preliminary hops. (Rope low).
- 87-32. St. Hi. jumps over a row of low ropes.
- 88-30. Run. Hi. jump with named foot.
- 89-37. (St.-l. Ft.Rst.) Hi. jump over bench.
- 90-33. St. Long jump from a mark.
- 91-36. (Hi.St.) D. jump off both feet. (Bench).
- 92-36. (Hi.St.) D. jump off one foot, with other leg swing. f. (Bench).

THIRD YEAR (AGE 11).

- 93-30. Run. Hi. jump.
- 94-36. Run. Hi. jump on to low vaulting box, landing on both feet and immediate D. jump (later with Am. swing. f. & u. in the D. jump).
- 95-31. (Sd.St.) One step & Obl. Hi. jump. (later with 2 & 3 steps).
- 96-31. Run. Obl. Hi. jump.
- 97-34. "As far as you can get in three standing jumps."
- 98-39. Hop, step and jump.
- 99-36. (Hi.St.) Quick Kn. full bend, & D. jump f. (Box, horse, beam).
- 100-36. Run. D. jump. (Sloping bench on low beam or another bench).
- 101-36. (Hi.St.-Crh.) D. jump with one hand grasping apparatus. (Sloping bench on beam at waist height, later higher).
- 102-36. Run. D. jump with one hand grasping apparatus. (Sloping bench on beam at shoulder height, later higher).

FOURTH YEAR (AGE 12).

- 103-31. Run. Obl. Hi. jump in stream.
- 104-31. Run. Obl. Hi. jump, landing on both feet.
- 105-36. Run. Hi. jump on to apparatus, D. jump with body stretched.
- 106-38. Run. Hi. jump with high take-off. (Rope and top section of vaulting box).
- 107-40. Combined High and Long jump ("Fence and ditch").
- 108-35. Run. Hurdle jump for length over a marked space (landing on one foot and running on).
- 109-35. Run. Hurdle jump over low rope.
- 110-36. (Bal.St.) D. jump s. with one hand grasping beam. (Beam at hip height, later higher).
- 111-41. (Hg.-Bk.Rst.) D. jump. (Wall bars).

FIFTH YEAR (AGE 13).

- 112-36. (Hi.St.) Long jump. (Top section of vaulting box).
- 113-35. Run. Hurdle jump in stream.
- 114-35. Run. Hurdle jump over 2 or more ropes, with 3 strides between jumps.

LEAPING EXERCISES.

SIXTH YEAR (AGE 14).

- 115-43. Run. Hi. jump through a "window." (2 ropes on one jumping stand).

SEVENTH YEAR (AGE 15).

- 116-42. (Hi.Sd.St.) D. jump s. (Wall bars).

III. VAULTING.

FIRST YEAR (AGE 9).

- 117-45. Run. Asd. vault to sit. asd. apparatus ; dismt. b. or s. Free form. (Box or horse lengthw.).
118-45. Run Asd. vault. (Buck lengthw.).
119-46. (St.-In.U.Gr.) Swing. f. & b., & D. jump at end of b. swing. (2 ropes).

SECOND YEAR (AGE 10).

(Repeat in Third and Fourth Years.)

- 120-47. (Sd.St.) Face vault with bent knees (later with legs thrown b.). (Sloping bench).
121-47. (Sd.St.) Face vaults with bent knees along hz. bench or low beam.
122-47. Run. up sloping bench to Crh.-Gr. posn., then vault. down s. (Steep bench on wall bars).
123-47. Run. Face vault with bent knees to sit asd. apparatus ; dismt. by swing. legs. f. & then b. (Box or horse crossw.).
124-48. Run. Gate vault. (2 beams).
125-48. (Bal.Sup.) Gate vault. (2 beams).
126-46. (St.-In.U.Gr.) Swing. f. & b., & D. jump at end of b. swing. (2 ropes, later 1 rope).
127-46. (St.-In.U.Gr.) Swing. f. & D. jump. (2 ropes).

THIRD YEAR (AGE 11).

- 128-44. (St.-F.Gr.) Vault. to Bal. Sup. (Beam just over hip height).
129-44. (Bal.Sup.) Dismt. & vault. back to Bal. Sup.
130-44. Two (Three) steps & vault to Bal. Sup. ; dismt. b. with (later without) grasp of beam. (Beam at low chest height).
131-44. Run. vault to Bal. Sup. ; dismt. b. with (or without) grasp of beam. (Beam at low chest height).
132-45. Run. Asd. vault (:). ["Leap Frog"].
133-45. Cat jump. (Bench ; later up sloping bench, dismtg. with Face vault at top).
134-47. Run. Obl. Face vault. (Sloping bench).
135-51. (St.-F.Gr.) Thro. vault to st. on apparatus ; D. jump off one foot. (Low beam with saddle).

LEAPING EXERCISES.

- 136-51. (St.-F.Gr.) Thro. vault to sit on apparatus. (Low beam with saddle).
137-51. Run. Thro. vault. (Beam with saddle, or horse with pommels).
138-46. (St.-In.U.Gr.) Swing f. & D. jump. (1 rope).

FOURTH YEAR (AGE 12).

- 139-45. Run. Asd. vault. (Buck crossw.).
140-45. Run. Asd. vault. b. to sit. asd. apparatus ; dismt. b. or s. ; free form (Box or horse lengthw.).
141-45. Run. Asd. vault. b. (Buck lengthw.).
142-49. (Sd.St.-Lg.B.) Obl. Bk. vault. (Beam).
143-49. Run. Obl. Bk. vault. (Beam).
144-46. (Fr.St.) Jump & swing f. & b., & D. jump in b. swing. (Beam at stretch height).

FIFTH YEAR (AGE 13).

- 145-45. Run. Asd. vault to st. on apparatus ; Asd. dismt. f., or D. jump. (Horse or box lengthw.).
146-45. Run. Asd. vault to sit. asd. apparatus as far forward as possible ; dismt. s. (Horse lengthw.).
147-51. Run. Thro. vault to st. on apparatus ; D. jump off both feet, later with Am. swing. f. & u. (Box or horse crossw.).
148-51. Run. Thro. vault. (Box or horse crossw.).
149-47. Run. Face vault, free form. (Beam or box crossw.).
150-47. Run. Hi. Face vault. (Low box crossw.).
151-49. Three steps (later, Run.) Obl. Bk. vault to sit asd. apparatus ; dismt. by swing. legs b. & then f. (Horse or box).
152-46. (Fr.St.) Jump & swing f., & D. jump over marked space. (Single beam).
153-46. (Sd.St.) Obl. Heav. vault. (2 beams).
154-46. Run. Heav. vault. (2 ropes & over section of box, beam, or jumping rope).

SIXTH YEAR (AGE 14).

- 155-45. Run. Asd. vault to st. asd. on apparatus ; D. jump. (Horse crossw. with pommels).
156-45. Run. Asd. vault. (Horse or box lengthw.).
157-45. Cat jump. (Box or horse lengthw.).
158-47. Run. Face vault, good form. (Box or beam).
159-47. Run. Handspring vault. (Low box crossw.).
160-49. Run. Obl. Bk. vault. (Horse, box or beam).
161-49. Run. Obl. Bk. vault with shoot f. (Horse, box or beam).

LEAPING EXERCISES.

SEVENTH YEAR (AGE 15).

- 162-45. Run. Asd. vault. (Horse crossw. with pommels).
- 163-45. Run. Hz. Asd. vault over rope. (Rope & low box lengthw.).
(First trials without the rope).
- 164-51. Run. Thro. vault with one leg leading. (Low beam with saddle ;
later, horse with pommels).
- 165-49. Run. Bk. vault to sit asd. apparatus ; dismt. s. with leg swing.
b. & then f. (Horse or box crossw.).
- 166-49. Run. B. vault. (Beam. box or horse crossw.).
- 167-46. Run. Heav. vault to Hi. St. posn. (2 ropes & box).

EIGHTH YEAR (AGE 16).

- 168-45. Run. Hz. Asd. vault. (Box or horse lengthw.).
- 169-45. Run. Asd. vault b. (Sloping horse lengthw.).
- 170-51. Run. Thro. vault to st. on apparatus, & immediate D. jump
off both feet, later with Am. swing. s. (f. & u.) (Box or horse
crossw.).
- 171-51. Run. Thro. vault with one leg leading. (Box or horse crossw.).
- 172-46. Run. Heav. vault. (Single beam & over jumping rope or
horse).
- 173-50. Run. Sd. vault. (2 beams).
- 174-50. Run. Sd. vault, with turn to lower hand. (2 beams).
- 175-50. Run. Sd. vault, with turn to upper hand. (2 beams).
- 176-50. Run. Sd. vault. (1 beam, or box).
- 177-52. (Asd.Sit.) Lg. swing. b. to Sd. Sit., & b. to Asd. Sit. (Horse or
box).
- 178-52. (Asd.Sit.) Lg. swing. f. to Sd. Sit., & f. to Asd. Sit. (Horse or
box).
- 179-52. (Asd.Sit.) Lg. swing. b. to Sd. Sit. facing opp. direction, & b.
to Asd. Sit. (Box, horse).
- 180-52. (Asd.Sit.) Lg. swing. b. to Asd.Sit. facing opp. direction. (Box,
horse).

NINTH YEAR (AGE 17).

- 181-45. Run. Asd. vault b. (Horse or box lengthw.).
- 182-47. Run. Face vault with hi. take-off. (2 beams, beam & bench,
or box).
- 183-46. Run. Heav. vault. (2 beams).
- 184-45. Run. Hz. Asd. vault. (Horse crossw. & box lengthw.).

EXAMPLES OF COMBINED VAULTS.

- 185. Run. Asd. vault over buck onto near end of low box (lengthw.),
& asd. dismt. or handspring off other end.

LEAPING EXERCISES.

- 186. Run. Thro. vault over buck onto low box (lengthw.), & Hz. Asd. vault over rope & horse (lengthw.).
- 187. Run. Asd. vault over buck to Heav. vault on beam over rope or horse.
- 188. Run. Heav. vault on 2 ropes onto near end of box or horse (lengthw.), & asd. dismt. or handspring off other end.
- 189. Leap frog, followed by Forward roll to stand up or run on.

AGILITY EXERCISES.

SECOND YEAR (AGE 10).

- 1- 1. Forward roll.
- 2- 1. Two forward rolls consecutively.
- 3- 1. Running forward roll and stand up.

THIRD YEAR (AGE 11).

- 4- 3. Introduction to Hand standing [(Bt.Fr.Sup.) Lg. kick. u.].
- 5- 4. Introduction to Hand-spring over a back.
- 6- 1. Running forward roll to spring up and run on.
- 7-10. Introduction to Cartwheel.
- 8- 2. Backward roll.
- 9- 3. Introduction to Hand-standing (:).
- 10- 5. Head-standing position on mat and against wall; later with (:)
later still without support for legs.

FOURTH YEAR (AGE 12).

- 11- 4. Introduction to Hand-spring over high backs.
- 12- 3. Hand-standing with support against wall (::). (Later without support).
- 13-10. Cartwheels (free practice).
- 14- 6. Head-spring over box lengthways (begin with box at knee height).
- 15- 3. (Knee hanging) Swing down through Hn. St. posn. (Ladder, later beam).
- 16- 3. (Hi.Bk.Ly.) Swing down through Hn.St.posn. (Beam with saddle).

FIFTH YEAR (AGE 13).

- 17- 3. Walk on hands.
- 18- 6. Head-spring over pad.
- 19- 4. Standing Hand-spring from low box.
- 20-10. Cartwheels along a line (free practice).
- 21- 6. Head-spring on mat.
- 22- 4. Running Hand-spring (hands on pad).
- 23- 4. Running Hand-spring from supporter's knees.

AGILITY EXERCISES.

SIXTH YEAR (AGE 14).

- 24- 4. " Kicking horse."
- 25-10. Cartwheels in files at command.
- 26- 3. Hand-standing, throwing legs up together.
- 27-10. Cartwheels, bringing legs together over head.
- 28- 6. Running Head-spring.
- 29- 4. Running Hand-spring (hands on mat).
- 30- 7. Back-spring.
- 31- 9. Standing Dive over low rope.

SEVENTH YEAR (AGE 15).

- 32- 3. (Hn.St.) Am.bend.
- 33- 4. Running Hand-spring, throwing legs up together.
- 34- 3. Roll backwards to Hand-standing posn.
- 35-11. " Spin the man."
- 36- 9. Running Dive over low rope.

EIGHTH YEAR (AGE 16).

- 37- 6. Two or more Head-springs consecutively.
- 38- 8. Hand-spring, Head-spring and Back-spring consecutively.
- 39- 3. Hand-standing position followed by Forward roll.
- 40- 9. Running Dive over rope or low vaulting box, over bench or back of another boy, &c.

PART IV

PROGRESSIVE LISTS OF EXERCISES
for boys who have followed the ordinary elementary
school course up to the age of 13+ or 14 (boys
in Day Continuation Schools, Junior Technical
Schools, Junior Commercial Schools, etc.)

NOTE.—The numbers in italics on the right of the serial
numbers refer to the paragraphs of Part II where
the descriptions of the exercises are given.

LEG EXERCISES.

TYPES.

- I. Feet closing and opening.
 - II. Toe placing.
 - III. Foot placing sideways (and heel raising and knee bending).
 - IV. Lunging.
 - V. Heel raising and knee bending.
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I. FEET CLOSING AND OPENING.

FIRST YEAR (AGE 13-14).

- 1- 2. (St.) Ft. clos. & Hl. rais., Ft. open. & Hl. rais. (1-3, 1-3. Later, 1-6).

II. TOE PLACING.

FIRST YEAR (AGE 13-14).

- 2- 3. (St.) Toe plac. b.
- 3- 3. (St.) Toe plac. s. with Am. rais. s.
- 4- 3. (St.) Toe plac. f. with Am. rais. s.

SECOND YEAR (AGE 14-15).

- 5- 3. (St.) Toe plac. s. with Am. rais. s. & u.
- 6- 3. (St.) Toe plac. f. with Am. rais. s. & u.

III. FOOT PLACING SIDEWAYS (AND HEEL RAISING AND KNEE BENDING).

FIRST YEAR (AGE 13-14).

- 7- 7. (St.) Ft. plac. s. with Am. swing. s. & u. (T.C. 1-4).
- 8- 8. (St.-Hn.Hp.) Ft. plac. s. & Hl. rais. & Kn. bend. (1-6).

SECOND YEAR (AGE 14-15).

- 9- 9. (St.) Ft. plac. s. & Hl. rais. with Am. stretch. u. & d. (T.C. 1-4, later 1-8).
- 10-10. (St.-Low Hn.Hp.) Ft. plac. wide s. (T.C. 1-2, later 1-4).
- 11-11. (St.-Wd.Asd.-1 Kn.Bd.-Low Hn.Hp.) Rhyth. take-off.
- 12-11. (St.-Wd.Asd.-1 Kn.Bd.-Ac.Bd.) Rhyth. take-off with Am. fling.

THIRD YEAR (AGE 15-16).

- 13-11. (St.-Wd.Asd.-1 Kn.Bd.-U.Bd.) Rhyth. take-off with Am. stretch. s. (u.).
- 14- 9. (St.) Ft. plac. s., Hl. rais. & Kn. bend., with Am. stretch. u. & s. (1-6).

IV. LUNGING.

FIRST YEAR (AGE 13-14).

- 15-15. (St.-Ft.Fl.Op.-Hn.Hp.) Lung. o. with toe pointing.
 16-16. (St.-Ft.Fl.Op.-Hn.Hp.) Lung. o.

SECOND YEAR (AGE 14-15).

- 17-18. (St.-Ln.O.-U.Bd.) Hd. rst. & Am. bend. u.
 18-20. (St.-Hn.Hp.) Toe lung. b.

THIRD YEAR (AGE 15-16).

- 19-17. (St.-Ft.Fl.Op.-Hn.Hp.) Moving f. by lung. o. in zig-zag.

FOURTH YEAR (AGE 16-17).

- 20-19. (St.-Ln.O.-Hn.Hp.) Front Hl. rais.

V. HEEL RAISING AND KNEE BENDING.

FIRST YEAR (AGE 13-14).

- 21-23. (St.-U.Bd.) Quick Hl. rais. with Am. stretch. u.
 22-23. (St.) Hl. rais. with Am. stretch. u. & d.
 23-23. (St.-U.Bd.) Hl. rais. with slow Am. stretch. u., Hl. lower. with quick Am. bend.
 24-32. (St.-U.Bd.) Hl. rais. with slow Am. stretch. u., Kn. bend. with quick Am. bend., Kn. stretch. with quick Am. stretch. u. (s.), Hl. lower. with slow Am. bend.
 25-24. (St.-Ft.F.-U.Bd.) Hl. rais. with Am. stretch. u.
 26-31. (St.) Quick Hl. rais. & Kn. bend. with Am. chang.
 27-31. (St.-Hl.Ra.-Rvs.Am.S.) Kn. bend. with Am. rais. u.
 28-31. (St.-Hn.Hp.) Quick Hl. rais. & Kn. fl. bend. (also in other arm posns.).
 29-31. (St.-Asd.-Hl.Ra.-U.Bd.) Quick Kn. bend. with Am. stretch. s.
 30-38. (St.-Asd.-Hl.Ra.-Hn.Hp.) 1 Kn. bend. (Introduced with F.Gr. on wall bars).
 31-31. (St.-Hd.Rst.) Quick Hl. rais. & Kn. bend., rhyth.
 32-31. (St.) Hl. rais. & Kn. bend., with Am. stretch. u. & d. (1-4, quick and slow).
 33-32. (St.-Kn.Bd.-Am.S.) Am. fling.
 34-31. (St.) Hl. rais., Hd. turn., Kn. fl. bend., Nk. rst. & Hn. Hp.
 35-31. (St.) Hl. rais. & Kn. bend., with Am. rais. s. & u.
 36-31. (St.-Hl.Ra.) Slow Kn. fl. bend. & stretch.
 37-37. (St.-Crh.) 1 Lg. stretch. s. (1-4 ; later 1-2).
 38-31. (St.-Hl.Ra.-Rvs.Am.S.) Quick Kn. bend. with Am. swing. u.
 39-32. (St.-Nk.Rst.) Hl. rais. & Kn. bend. ; Hn. Hp. & Nk. Rst. after each leg move.

LEG EXERCISES.

- 40-31. (St.-Hl.Ra.-Am.S.) Quick Kn. bend. with Am. fling.
41-32. (St.-Kn.Bd.-U.Bd.) Am. stretch. u.
42-31. (St.-Hl.Ra.) Kn. fl. bend. & stretch., rhyth.
43-41. (St.-Kn.Fl.Bd.) Jump. to St.-Asd.-Hl.Ra. with Am. bend. u.
or swing. m.

SECOND YEAR (AGE 14-15).

- 44-25. (St.-Hl.Ra.) Quick Hl. lower. & rais. (one movement ; without noise).
45-31. (St.-Asd.) Hl. rais. & Kn. bend., with Am. stretch. u. & d.
46-32. (St.-Kn.Bd.-U.Bd.) Am. stretch. s. (m.).
47-39. (St.-Asd.-Hl.Ra.-1 Kn.Bd.-Nk.Rst.) Alt. Kn. bend. (1-2).
48-31. (St.-Asd.-Hl.Ra.-Am.S.) Quick Kn. bend. with Am. fling.
49-31. (St.-Hl.Ra.-Nk.Rst.) Slow Kn. fl. bend. & stretch.
50-31. (St.-Hl.Ra.-U.Bd.) Quick Kn. bend. with Am. stretch. u.
51-31. (St.-Hl.Ra.-Am.U.) Quick Kn. bend. with Am. bend.
52-32. (St.-Kn.Fl.Bd.-Am.U.) Am. part.
53-31. (St.-Hl.Ra.-Am.U.) Kn. bend. with Am. part.
54-31. (St.-Asd.-Hl.Ra.-Am.U.) Kn. bend. with Am. part.
55-31. (St.-Hl.Ra.-Am.U.) Slow Kn. fl. bend. & stretch.
56-32. (St.-Hl.Ra.-Rvs.Am.S.) Kn. fl. bend., Am. rais. u., Kn. stretch.,
Am. lower. s. (T.C. 1-4, rhyth.).
57-32. (St.-Asd.-Hl.Ra.-Rvs.Am.S.) Quick Kn. bend., Am. swing. u.
Kn. stretch., Am. swing. s. (T.C. 1-4, rhyth.).
58-37. (St.-Crh.) 2 Lg. stretch. s.

THIRD YEAR (AGE 15-16).

- 59-31. (St.-Am.U.) Hl. rais. & Kn. fl. bend., rhyth.
60-32. (St.-Asd.-Kn.Bd.-U.Bd.) Am. stretch. s. (u.).
61-31. (St.-Hl.Ra.-Am.U.) Kn. bend. with Nk. rst.
62-31. (St.-Nk.Rst.) Hl. rais. & Kn. fl. bend., rhyth.
63-32. (St.) Hl. rais. & Hd. turn., Kn. bend. & Hd. turn. (T.C., later
C.C. 1-12, quick movements).
64-41. (St.-Kn.Bd.-Am.C.) Quick Kn. stretch. with Am. swing. m.

FOURTH YEAR (AGE 16-17).

- 65-32. (St.-Kn.Fl.Bd.-U.Bd.) Am. stretch. in various directions.
66-31. (St.-Asd.-Nk.Rst.) Hl. rais. & Kn. bend., rhyth.
67-32. (St.-Asd.-Kn.Bd.-Am.U.) Am. stretch. u.
68-32. (St.-Kn.Bd.-Am.U.) Am. stretch. s. u. s., u. s. u., with Kn.
stretch. between the two series of arm stretchings.
69-40. (Fr.St.-Wd.Asd.-1 Kn.Fl.Bd.-F.Gr.) Alt. Kn. full bend. rhyth.
(later without grasp). (Wall bars, or in file with hands on
shoulders).

LEG EXERCISES.

- 70-40. (St.-Wd.Asd.-Hn.Hp. [Hd.Rst.]) 1 Kn. full bend. (later with arm movements added).
71-42. (St.-1 Kn.Fl.Bd.-1 Lg.F.-F. [S.] Gr.) Hop. with alt. Lg. stretch. f. (1-2). (Beam, wall bars, or in pairs).
72-31. (St.) Hl. rais. with Am. swing. f. & u., Kn. bend. with Am. across bend., Kn. stretch. with Am. fling., Hl. lower. with Am. swing. d.

ARM EXERCISES.

TYPES.

- I. Arm positions.
- II. Arm stretching and punching.
- III. Arm swinging.
- IV. Arm flinging.
- V. Combinations of :-
 - (i) different arm exercises.
 - (ii) arm and leg exercises.

I. ARM POSITIONS.

FIRST YEAR (AGE 13-14).

- 1- 1. (St.) Hn. Hp. posn.
2- 3. (St.) Clp. posn.
3- 6. (St.) Am. B. Clp. posn.
4- 2. (St.) Low Hn. Hp. posn.
5- 9. (St.) Am. M. posn.
6-11. (St.) Am. C. posn.
7-12. (St.-Asd.) Am.D.-Tr.F. posn.
8-18. (St.) F. Bd. posn.
9-17. (St.) Ac. Bd. Clp. posn.

II. ARM BENDING, STRETCHING AND PUNCHING.

FIRST YEAR (AGE 13-14).

- 10-19. (St.-U.Bd.) Am. stretch. m.
11-29. (St.-U.Bd.Clen.) 2 Am. punch. u. (f.).
12-19. (St.) Am. stretch. in different directions, once or more times in each direction. (T.C. & rhyth.).
13-22. (St.-U.Bd.) Alt. Am. stretch. u. & d. (rhyth.).
14-20. (St.-U.Bd.) Slow Am. stretch. u. ("pushing & pulling").
15-25. (Hi.Fr.Sup.) Am. bend.

ARM EXERCISES.

SECOND YEAR (AGE 14-15).

- 16-19. (St.-U.Bd.) Slow Am. stretch. f. (u.) & quick Am. bend. (T.C. & rhyth.).
17-19. (St.-U.Bd.) Slow Am. stretch. s. with palms u. & quick Am. bend. (T.C. & rhyth.).
18-22. (St.-U.Bd.) Alt. Am. stretch. u. & s. (s. & m.) (T.C. & rhyth.).
19-22. (St.-U.Bd.) Alt. Am. stretch. f. & s. (rhyth.).
20-24. (Bt.Fr.Sup.-Asd.) Am. bend.
21-26. (Fr.St.-Asd.) Rhyth. fall. f. (Wall bars).
22-27. (Pn.Ly.-Asd.-Fh.Rst.) Am. stretch.

THIRD YEAR (AGE 15-16).

- 23-22. (St.-1 U.Bd.) Alt. Am. stretch. u. & d. rhyth. (or other two directions).

III. ARM SWINGING.

FIRST YEAR (AGE 13-14).

- 24-30. (St.-Am.B.) Am. swing. f. & u., f. & b.
25-31. (St.-Rvs.Am.S.) Am. swing. f. with palms u.
26-32. (St.-1 Am.U.-1 Am.B.) Am. chang. by swing. f.
27-33. (St.-Asd.-F.Bd.) Rhyth. Am. swing. s. (later, with Hl. rais. & slight Tr. lean. f.).
28-34. (St.-Asd.-F.Bd.) Rhyth. El. & Am. swing. s.
29-44. (St.-Asd.-Clen.) Quick 1 Am. circl. b.

SECOND YEAR (AGE 14-15).

- 30-30. (St.-Am.F.) Am. swing. u. & f.
31-35. (St.-[Asd.]-Am.C.) Rhyth. Am. swing. m. (later with Hl. rais.).
32-31. (St.-1 Am.U.-1 Am.B.) Am. chang. with f. swing, with a step f. at each change.
33-45. (St.-Ln.O.-Hn.Kn.) Quick 1 Am. circl. b. ("Bowling exercise").

THIRD YEAR (AGE 15-16).

- 34-36. (St.) Rhyth. Am. swing. f., d. & s. (later, with chang. to alt. Am. swing. ; also with Hl. rais. with Kn. bend.).

IV. ARM FLINGING.

FIRST YEAR (AGE 13-14).

- 35-46. (St.-Am.S.Clen.) Am. fling.
36-46. (St.-Am.S.Clen.) Am. fling. (bend. & fling. in 1 move.).
37-46. (St.-Am.S.) Am. fling. (bend. & fling. in 1 move.).
38-46. (St.-Ac.Bd.) Am. fling.

V. EXAMPLES OF COMBINATIONS.

(i) *Of Different Arm Exercises.*

FIRST YEAR (AGE 13-14).

39. (St.) Am. swing. f., stretch s., & swing. d. (T.C., later rhyth.).
40. (St.) Am. swing. f. & u., stretch. s., & swing. d. (T.C., later rhyth.).
41. (St.-Am.F.) Am. swing. s. with palms u., bend. & stretch. f. (T.C., later rhyth.).
42. (St.) Am. swing. f. & u., & stretch. d.

SECOND YEAR (AGE 14-15).

43. (St.) Quick Am. stretch. u., & slow lower. s. & d.
44. Other combinations, e.g. (St.) Am. swing. f. & u., stretch. s., ac. bd., stretch. f., & swing. d.

(ii) *Of Arm and Leg Exercises.*

See Leg Exercises for combinations of arm and leg movements.

DORSAL EXERCISES.

TYPES.

- I. Head exercises.
- II. Trunk bending forward or downward in the Standing, Sitting or Kneel Sitting positions, and stretching forward from Trunk Downward position.
- III. Spanning exercises.
- IV. Prone Lying.
- V. Exercises in Front Rest Hanging position.

I. HEAD EXERCISES.

FIRST YEAR (AGE 13-14).

- 1- 8. (St.) Hd. press. b.
- 2- 8. (St.-Asd.-Hn.Th.) Hd. press. b.
- 3- 8. (St.) Hd. press. b. with Am. turn. o.
- 4- 5. (St.-Clp.) Hd. bend. s.
- 5- 1. (St.-Clp.) Hd. turn.
- 6- 8. (St.-Hn.Th.) Rhyth. Hd. press. b.

SECOND YEAR (AGE 14-15).

- 7- 8. (St.-Am.S.) Hd. press. b. with Am. turn.
- 8- 1. (St.-Clp.) Quick Hd. turn. from s. to s.

DORSAL EXERCISES.

II. TRUNK BENDING FORWARD AND DOWNWARD IN THE STANDING, SITTING AND KNEEL SITTING POSITIONS.

FIRST YEAR (AGE 13-14).

- 9-17. (St.) Tr. bend. d. to touch toes or floor with fingers, knuckles or palms, in rhythm of breathing.
- 10-15. (St.-Asd.) Tr. bend. d. to grasp ankles.
- 11-16. (St.-Bk.Rst.-D.Gr.) Tr. bend. d. (Wall bars).
- 12-15. (St.-Asd.) Tr. bend. d. with hands behind thighs.
- 13-14. (Hz.Sit.-Kn.Ra.Op.-Kn.Gr.) Tr. bend. d.
- 14-17. (St.-Asd.-Hn.Hp.) Rhyth. Tr. bend. d.
- 15-28. (Knl.Sit.-Tr.D.-Fh.Rst.) Am. stretch. f. along floor.
- 16-29. (Knl.Sit.-Tr.D.-Fh.Rst.) Tr. stretch. f. with El. swing. s.
- 17-19. (St.-Asd.-Am.D.-Tr.F.) Rhyth. Tr. press. d. to touch floor between legs.
- 18-11. (St.-Ac.Bd.-Tr.F.) Am. stretch. f.
- 19-29. (Knl.Sit.-Tr.D.-Fh.Rst.) Tr. stretch. f. with Am. swing. s.
- 20-24. (St.-Hn.Hp.-Tr.F.) Tr. bend. d. to touch floor, Tr. stretch. f. *with* Hn. Hp. (slow rhythm).
- 21-11. (St.-[Asd.]-Am.S.-Tr.F.) Am. fling.
- 22-23. (St.-[Asd.]-Hn.Hp.) Tr. bend. f. & d., stretch. f. & u. (1-4 T.C., or in slow even rhythm with slight pause in each posn.).
- 23-11. (St.-U.Bd.-Tr.F.) Slow Am. stretch. s. with palms u.
- 24-25. (St.-Asd.-Am.D.-Tr.F.) Rhyth. Tr. press. d. to touch floor between legs, followed by Hn. clasp behind back & Tr. stretch. f. with Am. stretch. b.
- 25- 9. (St.-Ft.F.-Hn.Hp.) Tr. bend. f.
- 26-11. (St.-[Asd.]-Am.S.-Tr.F.) Am. circl. spirally.
- 27-24. (St.-Ac.Bd.-Tr.F.) Tr. bend. d. to grasp ankles or touch floor, Tr. stretch. f. *with* Ac. Bd. (slow rhythm).
- 28-24. (St.-Am.S.-Tr.F.) Tr. bend. d. to grasp ankles or touch floor, Tr. stretch. f. *with* Am. rais. s.
- 29-11. (St.-U.Bd.) Tr. bend f. *with* 2 Am. punch. f. (u.).
- 30-11. (St.-Am.S.-Tr.F.) Am. fling. in 1 move.
- 31- 9. (St.-Ft.F.-Ac.Bd.) Tr. bend. f.
- 32-11. (St.-Asd.-Tr.F.) Alt. Am. punch. f. (u.) with Tr. turn.
- 33- 9. (St.-Ft.F.-Am.S.) Tr. bend. f.

SECOND YEAR (AGE 14-15).

- 34-11. (St.-Tr.F.) 2 Am. punch. f. (u.).
- 35-10. (St.U.Bd.) Tr. bend. f. *with* Am. stretch. u.
- 36-15. (St.-Ft.F.) T. bend. d. to grasp front ankle.
- 37-24. (St.-Hd.Rst.-Tr.F.) Tr. bend. d. to touch floor, Tr. stretch. f. *with* Hd. rst. (slow rhythm).
- 38-16. (St.-Bk.Rst.-D.Gr.) Tr. bend. d. with Hn. shift. d. (Wall bars).

DORSAL EXERCISES.

- 39-20. (St.-Wd.Asd.-Tr.D.-Ak.Gr.) Rhyth. Tr. press. d.
- 40-10. (St.-Asd.-Am.U.) Quick Tr. bend. f. *with* Am. bend. or Am. ac. bend.
- 41- 9. (St.-[Asd.]-Am.U.) Tr. bend. f.
- 42- 9. (St.-Ft.F.-Am.U.) Tr. bend. f.
- 43-11. (St.-1 Am.U.-1 Am.B.-Tr.F.) Am. chang. with swing. f.
- 44-11. (St.-Asd.-Am.B.-Tr.F.) Am. swing. f. & u., d. & b.
- 45-30. (Knl.Sit.-Am.B.Clp.-Tr.D.) Tr. stretch. f. with Am. stretch. b.
- 46-30. (Knl.Sit.-Hl.Gr.-Tr.D.) Tr. stretch. f. with pull on heels.
- 47-12. (Hz.Sit.-Kn.Ra.Op.-Rvs.Am.B.) Am. rais. s. & u. ; later Am. swing. u. & clap over head.
- 48-25. (St.-Asd.-Am.B.Clp.-Tr.F.) Tr. bend. d., & stretch. f. with Am. stretch. b.
- 49-12. (Hz.Sit.-Kn.Ra.Op.-F.Bd.) Rhyth. Am. swing. s.
- 50-13. (Hz.Sit.-Am.C.) Am. swing. m.
- 51-25. (Hz.Sit.-Kn.Ra.Op.-Nk.Gr.-Tr.D.) Tr. stretch. u.

THIRD YEAR (AGE 15-16).

- 52-24. (St.-Nk.Rst.-Tr.F.) Tr. bend. d. to grasp ankles or touch floor, Tr. stretch. f. *with* Nk. rst.
- 53-21. (St.-Wd.Asd.-Nk.Gr.Tr.D.) Rhyth. Tr. press. d.
- 54-11. (St.-F† F.-Am.S.-Tr.F.) Am. fling.
- 55-11. (St.-Asd.-U.Bd.-Tr.F.) Am. stretch. u., slow & quick.
- 56-11. (St.-Asd.-Rvs.Am.B.-Tr.F.) Am. swing. s. & u. to clap hands above head.
- 57-12. (Hz.Sit.-Kn.Ra.Op.-F.Bd.-Tr.F.) Rhyth. El. & Am. swing. s.
- 58-11. (St.-Asd.-Am.D.-Tr.F.) Rhyth. El. & Am. swing. s. from F.Bd.
- 59-26. (St.) Rhyth. Tr. bend. d. with Am. C., & Tr. stretch. u. with Am. swing. m.
- 60-25. (St.-Asd.Nk.Gr.-Tr.F.) Rhyth. Tr. press. d., followed by rhyth. Tr. stretch. f. *with* Nk. Rst.

FOURTH YEAR (AGE 16-17).

- 61-24. (St.-Am.U.-Tr.F.) Tr. bend. d. to grasp ankles or touch floor, Tr. stretch. f. *with* Am. rais. u.
- 62-11. (St.-[Asd.]-Am.U.-Tr.F.) Am. swing. d. & b., f. & u.
- 63-11. (St.-[Asd.]-Am.U.-Tr.F.) Am. part.
- 64-11. (St.-[Asd.]-Rvs.Am.S.-Tr.F.) Am. rais.
- 65-11. (St.-[Asd.]-Am.U.-Tr.F.) Am. stretch. s. & u.
- 66-27. (St.-Wd.Asd.-Am.B.-Tr.F.) Rhyth. Am. swing. f. & u., Tr. bend. d. to beat Hn. on floor, Tr. stretch. f. with Am. swing. d. & b.
- 67-31. (Knl.Sit.-Tr.F.-U.Gr.) Rhyth. Tr. press. d. (:). (Wall bars).
- 68-32. (Hi.St.-Asd.-Tr.F.-U.Gr.) Am. bend. (:). (Wall bars).

DORSAL EXERCISES.

III. SPANNING EXERCISES.

FIRST YEAR (AGE 13-14).

- 69-33. (Bk.Ly.-Ac.Bd.) Span.
- 70-34. (Bk.Ly.-U.Gr.) Span. (Wall bars).
- 71-33. (Bk.Ly.-Am.S.) Span.
- 72-35. (Fr.St.-F.Gr.) Taking F. Hg. posn. (Wall bars).

SECOND YEAR (AGE 14-15).

- 73-33. (Bk.Ly.-Am.M.[U.]) Span.
- 74-38. (Lean St.-M.[U.]Gr.) Span. (Wall bars).
- 75-36. (Knl.Sit.-M.[U.]Gr.) Span. (Wall bars).
- 76-37. (Hz.Sit.-Asd.-Fxd.) Hd. press. b. with Tr. lower. b. to rest Hd. on floor. (Wall bars).

THIRD YEAR (AGE 15-16).

- 77-39. (Hz.Sit.-Bk.Rst.-Ft.Rst.-U.Gr.) Span. (:) (Feet against wall bars).
- 78-40. (Bk.Ly.-Kn.Ra.-U.Gr.) Span. (:) (Grasp 3rd or 4th bar above floor).

FOURTH YEAR (AGE 16-17).

- 79-41. (Knl.-U.[M.]Gr.-Tr.B.) Span. (:) (
- 80-37. (Hz.Sit.-Asd.-Fxd.-Am.U.) Hd. press. b. with Tr. lower. b. to rest hands on floor. (Wall bars).

IV. PRONE LYING.

FIRST YEAR (AGE 13-14).

- 81-43. (Pn.Ly.) Hd. press. b.
- 82-44. (Pn.Ly.-Am.U.) press. b. with Am. & Lg. rais.
- 83-45. Hi. Pn. Ly.-Hn. Hp. posn.
- 84-46. (Hi.Pn.Ly.-Hn.Hp.) Hd. turn.
- 85-48. (Hi.Pn.Ly.-Hn.Hp.) Tr. lower.
- 86-45. Hi. Pn. Ly.-Ac. Bd. posn.

SECOND YEAR (AGE 14-15).

- 87-47. (Hi.Pn.Ly.-U.Bd.) Am. stretch. s.
- 88-47. (Hi.Pn.Ly.-Ac.Bd.) Am. fling.
- 89-47. (Hi.Pn.Ly.-U.Bd.Clen.) 2 Am. punch. f.
- 90-45. Hi. Pn. Ly.-Hd. Rst. posn.
- 91-45. Hi. Pn. Ly.-Am. U. posn.

THIRD YEAR (AGE 15-16).

- 92-46. (Hi.Pn.Ly.-Ac.Bd.) Am. stretch. f.
- 93-48. (Hi.Pn.Ly.-Hd. Rst.) Tr. lower.
- 94-45. Hi. Pn. Ly.-Nk. Rst. posn.
- 95-48. (Hi.Pn.Ly.-Nk.Rst.) Tr. lower

FOURTH YEAR (AGE 16-17).

- 96-47. (Hi.Pn.Ly.-U.Bd.) Am. stretch. u.
 97-47. (Hi.Pn.Ly.-Am.U.) Am. part.
 98-47. (Hi.Pn.Ly.-Am.U.) Am. chang. to Nk. rst.
 99-48. (Hi.Pn.Ly.-Am.U.) Tr. lower.

V. EXERCISES IN FRONT REST HANGING POSITION.

FIRST YEAR (AGE 13-14).

- 100-49. (Hi.St.-U.Gr.) Hd. press. b. with Lg. lift. b. (straight legs).
 (Wall bars).
 101-49. (Hi.St.-U.Gr.) Hd. press. b. with Lg. lift. b. (with knees bent).
 (Wall bars).

HEAVING EXERCISES.

TYPES.

- I. Heaving and lowering.
 II. Arm walks and arm jumps.
 III. Circling.
 IV. Climbing :—
 (i) Ladder climbing.
 (ii) Rope climbing.
 V. Twisting in Window ladders.
 VI. Combined exercises.

I. HEAVING AND LOWERING.

FIRST YEAR (AGE 13-14).

- 1- 3. (Hi.St.-U.Gr.) Taking Hg. posn. (Wall bars).
 2-6, 7. Hg.-Or.Gr. & Hg.-Ur.Gr. posns. (Beam).
 3- 9. Hg.-In. Gr. posn. (Arm. ladder, 2 ropes).
 4-34. (Bt.B.Hg.) Heav. (Beam).
 5-19. (Hg.-Ur.Gr.) Heav. (Beam).
 6-19. (H.g.-In.Gr.) Heav. (Arm ladder).
 7-19. (Hg.-Or.Gr.) Heav. (Beam).

SECOND YEAR (AGE 14-15).

- 8-17. (Fr.St.[Hi.St.]-Hv.Gr.) Lg. rais. b. with Kn. bend. (Wall bars).
 9-19. (Hg.-In.Gr.) Heav. (2 ropes).
 10-20. Swing. with heav. & hi. Lg. rais. in f. swing. (2 ropes).
 11-18. (Hi.St.-Asd.-F.Gr.-Tr.F.) Heav. (:). (Wall bars).

HEAVING EXERCISES.

II. ARM WALKS AND ARM JUMPS.

FIRST YEAR (AGE 13-14).

- 12-21. (Hg.-Or.Gr.) Am. walk s., first in free form with short quick steps, later in correct form. (Wall bars, later beam).
- 13-22. (Hg.-Or.Gr.) Am. walk d. (Wall bars).
- 14-29. (Hg.-Or.Gr.) Am. walk s. with Lg. swing. (Beam, arm ladder).
- 15-24. (Hg.-In.Gr.) Am. walk b., at first in free form. (Arm ladder, beam).

SECOND YEAR (AGE 14-15).

- 16-30. (Hg.-Or.Gr.) Am. Walk s., stepping u. & d., with Lg. swing. (2 beams).
- 17-28. (Hv.Hg.-In.Gr.) Am. walk b. (Arm ladder). [Can be introduced by: (Hv.B.Hg.-In.Gr.) Am. & Lg. Walk b. (Beam at chest height)].

THIRD YEAR (AGE 15-16).

- 18-21. (Hv.Hg.-Ur.Gr.) Am. walk s. (Beam).
- 19-21. (Hv.Hg.-Or.Gr.) Am. walk s. (Beam).
- 20-24. (Hv.Hg.-In.Gr.) Am. walk b. (Beam).

III. CIRCLING.

FIRST YEAR (AGE 13-14).

- 21-38. (St.-Rvs.D.Gr.) Circl. d. with bent knees & hips. (Beam at hip height).
- 22-39. (Fr.St.-Tr.D.-B.Gr.) Lg. rais. to Rvs. Hg. posn. (Wall bars).
- 23-40. (St.-Ft.F.-Ur.Hv.Gr.) Circl. u. & d. with help of feet on upper beam. (2 beams, the lower at chest height).
- 24-42. (St.-In.Hv.Gr.) Circl., & later return circl. (2 ropes).

SECOND YEAR (AGE 14-15).

- 25-46. (Bal.Sup.) Circl. d. with straight knees. (Beam).
- 26-43. (St.-In.Hv.Gr.) Circl. to "swallow's nest." (2 ropes).

THIRD YEAR (AGE 15-16).

- 27-45. (Hg.-Ur.Gr.) Circl. u. & d. (Beam).
- 28-47. (Hi.Sit.) Circl. down b. (Beam).

FOURTH YEAR (AGE 16-17).

- 29-48. (Hi.Sit.) Circl. b. to Rvs. Hg. posn., & return to Hi. Sit. posn. (Beam).

IV. CLIMBING.

(i) *Ladder Climbing.*

FIRST YEAR (AGE 13-14).

- 30-50. (Fr.St.) Climb. up wall bars, free form. (Later can be taken as a race).
 31-51. (Fr.St.-Hv.Gr.) Climb. up wall bars, both feet then both hands moving together.

SECOND YEAR (AGE 14-15).

- 32-50. Ladder climb., free and later correct form. (Wall ladders).

THIRD YEAR (AGE 15-16).

- 33-50. Ladder climb. (Rope ladders).

(ii) *Rope Climbing.*

FIRST YEAR (AGE 13-14).

- 34-52. Preparatory climb. posns. on 2 ropes.
 35-53. Climb. 2 ropes.
 36-56. Making fast on 2 ropes.
 37-54. Preparatory climb. posns. on 1 rope.
 38-55. Climb. 1 rope.

SECOND YEAR (AGE 14-15).

- 39-57. Making fast on 1 rope.
 40-58. Climb. hz. along a line of ropes.
 41-59. Climb. diag. d. along a line of ropes.

THIRD YEAR (AGE 15-16).

- 42-60. Climb. diag. u. along a line of ropes.

V. TWISTING IN WINDOW LADDERS.

FIRST YEAR (AGE 13-14).

- 43-61. (Sit.) Hz. twist., Hd. leading.
 44-62. (Sit.) Vert. twist. u., Hd. leading.
 45-63. (Sit.) Vert. twist. d., Ft. leading.
 46-64. (Sit.) Diag. twist. d., Ft. leading.
 47-66. (Sit.) Diag. twist. u., Hd. leading.

SECOND YEAR (AGE 14-15).

- 48-65. (Sit.) Hz. twist., Ft. leading.
 49-67. (Sit.) Diag. twist. d., Hd. leading.

HEAVING EXERCISES.

VI. COMBINED EXERCISES.

- 50-68. (Bal.Sup.-Rvs.Gr.) Circl. d. to St.-Kn.Bd.-Ur.Gr. posn., throw legs f. to B.Hg.-Ur.Gr. & circl. u. to Bal. Sup., dismt. by jump. b. (Beam at chest height).
- 51-68. (Hg.-Or.Gr.) Heav., then press up to Bal. Sup. posn., turn to Sit. posn., circl. d. to Rvs. Hg., return circl. to Sit. posn., turn to Bal. Sup. posn., circl. d. to Hg.-Ur.Gr. posn., Circl. up to Bal. Sup. posn., dismt. by jump f. under beam. (Beam over stretch height).
- 52-68. (St.-Ur.Hv.Gr.) Circl. u. to Bal. Sup. posn. on lower beam, turn to Hi. Sit. posn., circl. u. to Bal. Sup. posn. on upper beam. circl. down f. to Hi. Sit. posn. on lower beam, circl. down b. to ground.

BALANCE EXERCISES.

TYPES.

I. On the Ground :—

- (i) Knee raising, & movements in the St.-Kn.Ra. position.
- (ii) Leg raising and carrying.
- (iii) Balance Lunge position.
- (iv) Balance marching.

II. On Apparatus :—

- (i) Mounting to Balance Standing, and exercises in this position.
- (ii) Balance marching, and running on sloping benches.
- (iii) Exercises from Side Sitting position.

I. ON THE GROUND.

- (i) *Knee Raising, and Movements in the St.-Kn.Ra. position.*

FIRST YEAR (AGE 13-14).

- 1-15. (St.-Hd.Rst.) Kn. rais. & Lg. stretch. f.
2-13. (St.-Nk.Rst.) Kn. rais.
3-15. (St.-Hn.Hp.) Kn. rais. & Lg. stretch. b.
4-15. (St.-Kn.Ra.-U.Bd.) Lg. stretch. b. with Am. stretch. u.

SECOND YEAR (AGE 14-15).

- 5-15. (St.-Kn.Ra.-Nk.Rst.) Lg. stretch. f.
6-13. (St.-Am.U.) Kn. rais.
7-15. (St.-Hn.Hp.) Kn. rais. & Lg. stretch. f. & b.
8-15. (St.) Kn. rais. & Lg. stretch. b., with Am. rais. s. & u.

THIRD YEAR (AGE 15-16).

- 9-15. (St.-Kn.Ra.-U.Bd.) Slow Am. stretch. u.
 10-15. (St.-Kn.Ra.-U.Bd.) Lg. stretch. f. with Am. stretch. s.
 11-15. (St.-Kn.Ra.-U.Bd.) Lg. stretch. b. & f. with Am. stretch. u. & s.
 12-16. (St.-Toe S. [Asd.]-Hn.Hp.) Kn. rais.

FOURTH YEAR (AGE 16-17).

- 13-15. (St.) Kn. rais. & Lg. stretch. f. with slow Am. stretch. u.
 14-15. (St.-Am.U.) Kn. rais. & Lg. stretch. b.
 15-15. (St.-Am.U.) Kn. rais. & Lg. stretch. f. & b.
 16-17. (St.-Wd.Asd.-1 Kn.Bd.-Hn.Hp.) Rhyth. Take-off with Kn. rais.
 17-18. (St.-Kn.Ra.-Hn.Hp.) Toe lung. b. (later with Am.stretch.s.).

(ii) *Leg Raising and Carrying.*

FIRST YEAR (AGE 13-14).

- 18-21. (St.-Hn.Hp.) Lg. rais. b.
 19-19. (St.-U.Bd.) Lg. rais. s. with slow Am. stretch. u.
 20-22. (St.-Lg.S.-Hn.Hp.) Lg. carry. f. (slow, later quick).
 21-19. (St.-Lg.S.-Am.S.) Am. circl. spirally.
 22-22. (St.-Lg.S.-Hn.Hp.) Lg. carry. b. (slow, later quick).
 23-19. (St.-Rvs.Am.S.) Lg. rais. s. with Am. rais. u.
 24-22. (St.-Lg.F.-Nk.Rst.) Lg. carry. s. (slow, later quick).
 25-22. (St.-Lg.S.-Nk.Rst.) Lg. carry. f. (slow, later quick).

SECOND YEAR (AGE 14-15).

- 26-22. (St.-Lg.F.-Am.U.) Lg. carry. s. (slow, later quick).
 27-20. (St.-Rvs.Am.S.) Lg. rais. f. with Am. rais. u.
 28-22. (St.) Lg. rais. f., carry. s. & lower., with Am. rais. f., part. & lower.
 29-19. (St.) Lg. swing. s. with Am. swing. s. (hold, & lower slowly).
 30-22. (St.-Lg.F.-Hn.Hp.) Lg. carry. s. & b. (slow, later quick).
 31-19. (St.-Am.U. [Nk.Rst.]) Lg. rais. s.

THIRD YEAR (AGE 15-16).

- 32-21. (St.-Am.S.) Lg. rais. b. with Am. rais. u.
 33-22. (St.) Lg. rais. s. & carry. b., with Am. rais. s. & u.

FOURTH YEAR (AGE 16-17).

- 34-22. (St.) Lg. rais. f. & carry. s., with Am. rais. f. & u.
 35-22. (St.) Lg. rais. f. & carry. s. & b., with Am. rais. f. s. & u.

(iii) *Balance Lunge Position.*

THIRD YEAR (AGE 15-16).

- 36-27. (St.-Toe Ln.-Hn.Hp.) Lg. rais. b.
 37-28. (St.-Toe B.-Hn.Hp.) Lg. rais. b. to Bal. Ln. posn.

BALANCE EXERCISES.

FOURTH YEAR (AGE 16-17).

- 38-29. (St.-Toe B.-Am.S.) Advancing with Bal. lung. (Later with Am. rais. u.).

(iv) *Balance Marches.*

FIRST YEAR (AGE 13-14).

- 39-26. Slow march with hi. Kn. rais. & Lg. stretch. f.

THIRD YEAR (AGE 15-16).

- 40-25. Low march.

II. ON APPARATUS.

(i) *Mounting to Balance Standing, and Exercises in this Position.*

FIRST YEAR (AGE 13-14).

- 41-30. (Sd.St.) Step up to Bal. St. ; jump down s. or f. (Bench, or beam below, later at knee height).
42-30. (St.-Asd. of beam) Step up to Bal. St. ; jump down with one or both hands on beam. (Beam from knee height to hip height). [Later, the S.P. to be Hi.Asd.Sit.].
43-31. (Bal.St.) Kn. bend., later Kn. fl. bend.
44-32. (Bal.St.) Kn. rais.
45-33. (Bal.St.) Turning 90°, later 180°.

SECOND YEAR (AGE 14-15).

- 46-30. (Sd.St.) Step up on round side of beam.
47-30. (Bal.Sup.) Rise to Bal. St. (Beam between hip & chest height).
48-30. (Fr.St.-Ur.Hv.Gr.) Circl. up & rise to Bal. St. ; jump down. (Beam at chest height).

THIRD YEAR (AGE 15-16).

- 49-35. (Bal.St.) Toe Ln. b.
50-35. (Bal.St.-Toe Ln.-Hn.Hp. [Am.S.] [Am.U.]) Lg. rais. b. to Bal. Ln. posn.

FOURTH YEAR (AGE 16-17).

- 51-32. (Bal.St.-Am.U.) Kn. rais. & Lg. stretch. b., (f.), (f. & b.).
52-35. (Bal.St.-Am.S.) Lg. rais. b. to Bal. Ln. posn.

(ii) *Balance Marches, and Running on Sloping Bench.*

FIRST YEAR (AGE 13-14).

- 53-36. Bal. march. f. (b.), arms free. (Bench-rib, or beam up to knee height).
54-36. Bal. march f., & at mid-beam turn 90° & jump down.

BALANCE EXERCISES.

- 55-36. Bal. march f. up (later, also down) sloping bench-rib. (Later on see-saw bench).
56-37. Bal. march f. with Ak. stretch.
57-44. Run. u. & d. sloping bench. (Bench on wall bars).
58-44. Run. u., turn., & run. d. sloping bench. (Turn half-way up at first).

SECOND YEAR (AGE 14-15).

- 59-36. Bal. march f. on round side of beam. (Beam right down).
60-39. Bal. march f. with dropping on one knee.

THIRD YEAR (AGE 15-16).

- 61-36. Bal. march alt. f. & b., turn. about at each step. (Practise first along bench top).
62-40. Bal. march b. with Kn. rais. & Lg. stretch. b.
63-41. Bal. march. f. with Kn. rais. & Lg. stretch. f.
64-42. Bal. march with 1 Kn. bend., 1 Lg. rais. f. & Am. rais. f.

FOURTH YEAR (AGE 16-17).

- 65-43. Bal. march with 1 Kn. fl. bend. & Am. rais. f.

(iii) Exercises from the Side Sitting Position.

SECOND YEAR (AGE 14-15).

- 66-46. (Bal.Sup.) Turn. to Sd. Sit. posn. between hands, later also to Sit. posn. (Beam low at first).
67-47. (Sd.Sit.) Lg. swing over beam to Asd. Sit. posn.

THIRD YEAR (AGE 15-16).

- 68-49. (Bal.Sup.) Moving along beam by turn. to Sd. Sit. between hands.
69-48. (Sd.Sit.) Lg. swing. over beam to Sd. Sit. on opposite side. (Beam low at first).

FOURTH YEAR (AGE 16-17).

- 70-50. (Bal.Sup.) Turn. to Sd. Sit. outside hands, later with moving along beam. (Beam low at first).

ABDOMINAL EXERCISES.

TYPES.

I. Knee and Leg raising :—

(i) in the Bk. Ly. position.

(ii) in the St.-Bk.Rst.-U.Gr. & the Hg.-Bk.Rst. positions.

II. Exercises in the Sit. & the Sit.-Kn.Ra. positions.

III. Front Support.

ABDOMINAL EXERCISES.

IV. Trunk lowering backward :—

- (i) in the Sit.-Fxd., the Hz.Sit.-Fxd., the Sit.-Kn.Ra.-Fxd. & the Knl. Sit. positions.
- (ii) in the St.-Fxd. position.

KNEE AND LEG RAISING.

(i) *In Back Lying Position.*

FIRST YEAR (AGE 13-14).

- 1- 2. (Bk.Ly.-Kn.Ra.) Kn. rais. to chest.
- 2- 3. (Bk.Ly.-Kn.Ra.) Lg. rais. over head to touch floor.
- 3- 4. (Bk.Ly.-Kn.Ra.-U.Gr.) Lg. rais. to fix feet asd. (Wall bars).
- 4- 7. (Bk.Ly.-Kn.Ra.-Am.U.) Cycling.
- 5- 8. (Bk.Ly.-Kn.Ra.) Thunder.
- 6- 6. (Bk.Ly.-Hi.Lg.Ra.-Fxd.-U.Gr.) Lg. stretch. (Wall bars).

SECOND YEAR (AGE 14-15).

- 7-10. (Bk.Ly.-Nk.Rst.) Lg. rais. to 90° with Kn. bend. & stretch.
- 8-11. (Bk.Ly.-Am.U.Clp.-Lg.Ra.) Lg. swing. d. with Tr. rais. to Hz. Sit. posn.
- 9-12. (Bk.Ly.-Am.S.Clen.) Kn. rais.; Lg. stretch. to 45° & lower.

THIRD YEAR (AGE 15-16).

- 10-13. (Bk.Ly.-Nk.Rst.) Lg. rais. to 90° (legs straight).
- 11-13. (Bk.Ly.-Am.U.) Lg. rais. to 45°.

FOURTH YEAR (AGE 16-17).

- 12-13. (Bk.Ly.-Am.U.) Lg. rais. slightly.

(ii) *In St.-Bk.Rst.-U.Gr., and Hg.-Bk.Rst. Positions.*

FIRST YEAR (AGE 13-14).

- 13-14. (St.-Bk.Rst.-U.Gr.) Cycling. (Wall bars).
- 14-17. (St.-Bk.Rst.-U.Gr.) Kn. rais. high. (Wall bars).
- 15-15. (Hg.-Bk.Rst.) Cycling. (Wall bars).
- 16-16. (Hg.-Bk.Rst.) 1 Kn. rais. (Wall bars).
- 17-22. (Hg.-Bk.Rst.) Alt. Kn. rais. (quickly 1-2). (Wall bars).

SECOND YEAR (AGE 14-15).

- 18-18. (St.-Bk.Rst.-U.Gr.) 1 Kn. rais. & Lg. stretch. f.
- 19-20. (St.-Bk.Rst.-U.Gr.) Kn. rais. & Lg. stretch. f.
- 20-17. (Hg.-Bk.Rst.) Kn. rais. high.
- 21-23. (Hg.-Bk.Rst.-Kn.Ra.) Kn. part.

ABDOMINAL EXERCISES.

- 22-25. (Hg.-Bk.Rst.) Kn. rais., Lg. stretch. f. & lower.
23-19. (St.-Bk.Rst.-U.Gr.) Kn. rais. & alt. Lg. stretch. f.
24-24. (Hg.-Bk.Rst.) Kn. rais. & Lg. swing. u.

THIRD YEAR (AGE 15-16).

- 25-26. (Hg.-Bk.Rst.) Lg. rais.

FOURTH YEAR (AGE 16-17).

- 26-23. (Hg.-Bk.Rst.-Lg.Ra.) Lg. part.
27-28. (Hv.Hg.-Bk.Rst.) Kn. rais. &c. (also with Tr. lower).

II. EXERCISES IN SIT. AND SIT.-KN.RA. POSITIONS.

FIRST YEAR (AGE 13-14).

- 28-30. (Hz.Sit.-Kn.Ra.-Ft.Rst.-Tr.F.-F.Gr.) Alt. Lg. stretch. (free)
(Wall bars).
29-31. (Hz.Sit.-Kn.Ra.Op.-Ak.Gr.) Lg. stretch. (later grasp feet near
toes).
30-32. (Hz.Sit.-Ft.Rst.) Tr. bend. d. to grasp feet or lowest wall bar.
31-33. (Hz.Sit.-Asd.) Tr. bend. d. to grasp feet.

SECOND YEAR (AGE 14-15).

- 2-34. (Hz.Sit.-Tr.D.-Ft.Gr.) Hl. lift. with hands.
333-35. (Hz.Sit.-1 Kn.S.-Ft.Gr.-Tr.D.) Tr. press. d.

THIRD YEAR (AGE 15-16).

- 34-36. (Hz.Sit.-Asd.-Ak.Gr.-Tr.D.) Tr. press. d. (:).
35-30. (Hz.Sit.-Kn.Ra.-Ft.Rst.-Tr.F.-F.Gr.) Lg. stretch. (Wall bars).

III. FRONT SUPPORT.

FIRST YEAR (AGE 13-14).

- 36-48. (Hi.Fr.Sup.) Ft. plac. f. with straight knees. (Beam. bench).
37-56. (Hi.Fr.Sup.) Am. bend. (Beam, later bench).
38-57. (Hi.Fr.Sup.-Asd.) 1 Am. rais. f. & u. (Beam or bench).
39-59. (Hi.Fr.Sup.) 1 Lg. rais.
40-51. (Bt.Fr.Sup.) Lg. kick. u.
41-46. (St.-Crh.) Alt. Lg. stretch. b.
42-51. (Bt.Fr.Sup.) Lg. kick. u.
43-55. (Fr.Sup.) Walk round with feet. (Free form).
44-55. (Fr.Sup.) Walk s. with hands & feet.
45-54. (St.-Crh.) Lg. throw. b. to Fr. Sup. posn.
46-50. (Hz.Knl.) Quick Lg. stretch.

ABDOMINAL EXERCISES.

SECOND YEAR (AGE 14-15).

- 47-59. (Fr.Sup.) 1 Lg. rais.
- 48-55. (Fr.Sup.) Ft. plac. asd. with jump.
- 49-57. (Fr.Sup.-Asd.) Plac. 1 Hn. on hip.
- 50-57. (Fr.Sup.-Asd.) 1 Am. rais. f. & u.
- 51-60. Low.Fr.Sup. posn., free form. (Wall bars).
- 52-61. (Low.Fr.Sup.) Hd. turn.

THIRD YEAR (AGE 15-16).

- 53-56. (Fr.Sup.) Am. bend.
- 54-59. (Fr.Sup.) Am. bend. with 1 Lg. rais.
- 55-56. (Hz.Fr.Sup.) Am. bend. (Bench, beam, wall bars).

FOURTH YEAR (AGE 16-17).

- 56-58. (Fr.Sup.-Asd.) Jump. (Later, also with clap hands & feet).
- 57-59. (Fr.Sup.-1 Lg. Ra.) Am. bend.
- 58-56. (Bt.Fr.Sup.-Asd.) Am. bend.

IV. TRUNK LOWERING BACKWARDS.

(i) *In Sit.-Fxd., Hz.Sit.-Fxd., Sit.-Kn.Ra.-Fxd., and Knl.Sit. Positions.*

FIRST YEAR (AGE 13-14).

- 59-62. (Sit.-Fxd.-Hn.Hp.) Tr. lower. b. slightly, & later to 45° (at first, lower and raise in rhythm of breathing, the hands grasping edge of bench). (Bench).
- 60-62. (Sit.-Fxd.-U.Bd.) Tr. lower. b. to 45° (Bench).
- 61-62. (Sit.-Fxd.-Hd.Rst.) Tr. lower. b., at first slightly, then to 45° (Bench).
- 62-63. (Sit.-Fxd.-Hn.Hp.) Tr. lower. b. to 90°. (Bench).
- 63-64. (Hz.Sit.-Fxd.-Hn.Hp.) Tr. lower. b. to 90°.
- 64-65. (Hz.Sit.-Kn.Ra.Op.-Fxd.-Hn.Hp.) Tr. lower. b. to 45° or 90°.
- 65-62. (Hz.Sit.-Fxd.-U.Bd.) Tr. lower. b. to 90°.
- 66-65. (Hz.Sit.-Kn.Ra.Op.-Fxd.-Hd.Rst.) Tr. lower. b. to 45°.

SECOND YEAR (AGE 14-15).

- 67-62. (Hz.Sit.-Fxd.-U.Bd.) Tr. lower. b. to 90°.
- 68-62. (Hz.Sit.-Fxd.-Hd.Rst.) Tr. lower. b. to 90°.
- 69-66. (Sit.-Fxd.-Hn.Hp.-Tr.B.) Am. chang. to U. Bd. (Bench).
- 70-67. (Hz.Sit.-Kn.Ra.Op.-Fxd.-U.Bd.-Tr.B.) Am. stretch. s.

THIRD YEAR (AGE 15-16).

- 71-62. (Sit.-Fxd.-Am.U.) Tr. lower. b. to 90°. (Bench).
- 72-67. (Sit.-Fxd.-U.Bd.-Tr.B.) Am. stretch. s. (Bench).
- 73-62. (Hz.Sit.-Fxd.-Hd.Rst.) Tr. lower. b. to 90°.
- 74-68. (Knl.Sit.) Tr. lower. b. with Am. rais. s. to rest Hd. & Hn. on floor. (:).

FOURTH YEAR (AGE 16-17).

- 75-62. (Hz.Sit.-Fxd.-Am.U.) Tr. lower. b. to 90°. (Hn.Hp. or U.Bd. posn. can be taken before raising the trunk).
 76-67. (Sit.-Fxd.-U.Bd.-Tr.B.) Am. stretch. u. (Bench).
 77-67. (Hz.Sit.-Fxd.-U.Bd.-Tr.B.) Am. stretch. s.
 78-67. (Hz.Sit.-Fxd.-U.Bd.-Tr.B.) Am. stretch. u.
 79-65. (Hz.Sit.-Kn.Ra.Op.-Fxd.-Am.U.) Tr. lower. b. to 45°.
 80-67. (Hz.Sit.-Kn.Ra.Op.-Fxd.-U.Bd.-Tr.B.) Am. stretch. u.

(ii) *In St.-Fxd.F. Position.*

THIRD YEAR (AGE 15-16).

- 81-69. (St.-Fxd.F.-Hn.Hp.) Tr. lower b. (Wall bars).
 82-69. (St.-Fxd.F.-U.Bd.) Tr. lower. b. (Wall bars).
 83-69. (St.-Fxd.F.-Nk.Rst.) Tr. lower. b. (Wall bars).
 84-69. (St.-Fxd.F.-Am.U.) Tr. lower. b. (Wall bars).

FOURTH YEAR (AGE 16-17).

- 85-70. (St.-Fxd.F.-U.Bd.-Tr.B.) Am. stretch. s. (Wall bars).
 86-70. (St.-Fxd.F.-U.Bd.-Tr.B.) Am. stretch. u. (Wall bars).
 87-72. (St.-Fxd.F.-Hn.Hp.) Tr. lower. b. *with* 1. Kn. bend. (Wall bars).
 88-71. (St.-Fxd.F.-Am.U.-Tr.B.) Am. swing. f. & u. (Wall bars.)

LATERAL EXERCISES.

TYPES.

- I. Trunk turning.
- II. Trunk bending sideways :—
 - (i) in Asd. St. position.
 - (ii) in Sd.St.-Fxd. position.
- III. Trunk lowering sideways.
- IV. Side Support.
- V. Exercises in Lunge outward position.

I. TRUNK TURNING.

FIRST YEAR (AGE 13-14).

- 1-10. (St.-Asd.-Ac.Bd.) Quick Tr. turn. *with* Am. fling.
 2-14. (St.-Asd.-U.Bd.) Quick Tr. turn. *with* Am. stretch. u.
 3-7. (St.-Asd.-Am.S.Clen.) Quick Tr. turn. from s. to s. with alt. Am. swing. across.
 4-13. (St.-Asd.-1 Hn.Hp.-1 Am.C.) Quick Tr. turn. with 1 Am. swing. m.

LATERAL EXERCISES.

- 5- 8. (Hz.Knl.) 1 Am. swing. s. with Tr. & Hd. turn. (1-4).
6- 9. (St.-Asd.-Am.D.-Tr.F.) Alt. Am. swing. s. with Tr. & Hd. turn.
(1-2, later rhyth. from s. to s.).

SECOND YEAR (AGE 14-15).

- 7-11. (St.-Wd.Asd.-Ac.Bd.Clp.) Rhyth. quick Tr. turn. from s. to s.
with El. swing.
8-12. (St.-Wd.Asd.-F.Bd.) Quick Tr. turn. with 1 Am. fling.

THIRD YEAR (AGE 15-16).

- 9-15. (St.-U.Bd.-Tr.Tn.) Am. stretch. s. (u.).
10-15. (St.-Asd.-Am.S.Clen.-Tr.Tn.) Am. fling.
11-11. (St.-Asd.-Am.S.-Tr.Tn.) Am. fling.

FOURTH YEAR (AGE 16-17).

- 12- 4. (St.-Asd.-Am.U.) Tr. turn.
13-11. (St.-Am.S.Clen.-Tr.Tn.) Am. fling.
14-14. (St.-Asd.-U.Bd.) Tr. turn. with slow Am. stretch. u.

II. TRUNK BENDING SIDEWAYS.

(i) *In St.-Asd. Position.*

FIRST YEAR (AGE 13-14).

- 15-27. (St.-Asd.-Hn.Hp.) Tr. bend. s. with opp. Hl. rais.
16-24. (St.-Asd.-Am.S.) Quick Tr. bend. s.
17-26. (St.-Asd.-Am.S.) Tr. bend. s. to touch floor.
18-25. (St.-Asd.) Rhyth. quick Tr. bend. from s. to s.
19-21. (St.-Asd.) Tr. bend. d. to grasp 1 Ak. & rhyth. Tr. press. d.
20-25. (St.-Asd.-Low Hn.Hp.) Rhyth. quick Tr. bend. from s. to s.

SECOND YEAR (AGE 14-15).

- 21-27. (St.-Asd.-Am.S.Clen.) Quick Tr. bend. from s. to s.
22-27. (St.-Asd.-Am.S.) Tr. bend. s. with opp. Hl. rais.
23-25. (St.) Rhyth. quick Tr. bend. from s. to s.
24-27. (St.-Asd.-Low Hn.Hp.) Rhyth. quick Tr. bend. from s. to s.
with opp. Hl. rais.

THIRD YEAR (AGE 15-16).

- 25-28. (St.-Asd.-1 Hn.Hp.) Tr. bend. s. & rhyth. press.
26-27. (St.-Asd.-Hd.Rst.) Tr. bend. s. with opp. Hl. rais.
27-25. (St.-Asd.-Ac.Bd.[Am.S.]) Rhyth. quick Tr. bend. from s. to s.

FOURTH YEAR (AGE 16-17).

- 28-24. (St.-Asd.-Am.U.) Tr. bend. s.
29-29. (St.-Wd.Asd.-Hn.Hp.) Rhyth. Tr. bend, s. with opp. Kn. bend.

LATERAL EXERCISES.

- 30-29. (St.-Wd.Asd.-1 Hd. Rst.-1 Hn.Hp.) Rhyth. Tr. bend. s. with opp. Kn. bend.
 31-28. (St.-Asd.-1 Hn.Hp.-1 Nk.Rst.) Tr. bend. s. & rhyth. press.
 32-28. (St.-Asd.-1 Hn.Hp.-1 Am.U.Clen.) Tr. bend. s. & rhyth. press.
 33-29. (St.-Asd.) Rhyth. quick Tr. bend. from s. to s. with alt. Am. punch. over head & behind back.
 34-30. (St.-Wd.Asd.-1 Am.S.-1 Hd. Rst.) Rhyth. Tr. bend. s. with opp. Kn. bend.
 35-30. (St.-Asd.-1 Low Hn.Hp.-1 Hd.Rst.) Tr. bend. s. & rhyth. press.

(ii) *In Sd.St.-Fxd. Position.*

FIRST YEAR (AGE 13-14).

- 36-31. (Sd.St.-Fxd.) Tr. bend. d. to grasp ankle. (Wall bars).
 37-31. (Sd.St.-Ft.Rst.) Tr. bend. d. to grasp raised ankle. (Bench or beam).
 38-32. (Sd.St.-Fxd.-Hn.Hp.) Tr. bend. to both s. (Wall bars).
 39-32. (Sd.St.-Fxd.-Low Hn.Hp.) Rhyth. quick Tr. bend. from s. to s. (Wall bars).

SECOND YEAR (AGE 14-15).

- 40-32. (Sd.St.-Fxd.-Hd.Rst.) Tr. bend. to both s. (Wall bars).
 41-33. (Sd.St.-Fxd.-Ac.Bd.-Tr.S.) Am. fling. (Wall bars).
 42-32. (Sd.St.-Ft.Rst.-Hn.Hp.) Tr. bend. s. towards raised foot. (Bench or beam).
 43-32. (Sd.St.-Ft.Rst.-Am.S.Clen.) Tr. bend. s. towards raised foot. (Bench or beam).
 44-32. (Sd.St.-Fxd.-Hn.Hp.) Tr. bend. to both s. (Bench or beam).

THIRD YEAR (AGE 15-16).

- 45-32. (Sd.St.-Fxd.-Am.U.) Tr. bend. to both s. (Wall bars).
 46-33. (Sd.St.-Fxd.-U.Bd.-Tr.S.) Am. stretch. u. (Wall bars).
 47-32. (Sd.St.-Ft.Rst.-Hd.Rst.) Tr. bend. s. towards raised foot. (Bench or beam).
 48-32. (Sd.St.-Ft.Rst.-Am.M.Clen.) Tr. bend. s. towards raised foot. (Bench or beam).
 49-32. (Sd.St.-Fxd.-1 Low Hn.Hp.) Tr. bend. s. & rhyth. press. (to both sides). (Wall bars).

FOURTH YEAR (AGE 16-17).

- 50-32. (Sd.St.-Fxd.-Am.S.[Hd.Rst.]) Tr. bend. to both s. (Bench or beam).
 51-32. (Sd.St.-Fxd.-Ac.Bd.) Rhyth. quick Tr. bend. from s. to s. (Wall bars).
 52-32. (Sd.St.-Fxd.-1 Low Hn.Hp.-1 Hd. Rst.) Tr. bend. s. & rhyth. press. (to both sides). (Wall bars).

LATERAL EXERCISES.

III. TRUNK LOWERING SIDEWAYS.

FIRST YEAR (AGE 13-14).

- 53-35. (Sd.St.-Th.Rst.-Hn.Hp.) Tr. lower. s. with Lg. rais. (Beam).

SECOND YEAR (AGE 14-15).

- 54-35. (Sd.St.-Th.Rst.-1 Am.U.-1 Hn.Hp.) Tr. lower. s. with Lg. rais. (Beam).
55-35. (Sd.St.-Th.Rst.-Hd.Rst.) Tr. lower. s. with Lg. rais. (Beam).
56-34. (St.-Hn.Hp.) Tr. lower. s. with Lg. rais. (at first quickly then slowly, without pause between lower. & rais. ; later quickly and with a pause in the s. posn.).
57-34. (St.) Quick Tr. lower. s. with Lg. rais. & with Am. swing. s.

THIRD YEAR (AGE 15-16).

- 58-35. (Sd.St.-Th.Rst.-Am.U.) Tr. lower. s. with Lg. rais. (Beam).
59-36. (Sd.St.-Am.U.) Tr. lower. s. with Lg. rais. to grasp wall bars.

FOURTH YEAR (AGE 16-17).

- 60-37. Sideways holding.

IV. SIDE SUPPORT.

FIRST YEAR (AGE 13-14).

- 61-38. (Hi.Sd.Sup.-U.Gr.) Lg. rais. (Bench & wall bars).
62-38. (Hi.Sd.Sup.-Am.U.) Lg. rais. (Bench or beam).
63-39. (Fr.St.-Crh.-1 F.Gr.) Taking Sd. Sup. posn. (Wall bars).
64-40. (St.-Crh.) Taking Sd. Sup. posn. (Introduced from Hz.Sit. Asd.posn.).
65-40. (Sd.Sup.-Hn.Hp.) Lg. rais.
66-40. (Sd.Sup.-U.Bd.) Am. stretch. u.

SECOND YEAR (AGE 14-15).

- 67-41. (Sd.Sup.-Hn.Hp.) Hp. rais.

THIRD YEAR (AGE 15-16).

- 68-40. (Sd.Sup.-Am.U.) Lg. rais.

FOURTH YEAR (AGE 16-17).

- 69-40. (Sd.Sup.-U.Bd.) Lg. rais. with Am. stretch. u.

V. EXERCISES IN LUNGE OUTWARD POSITION.

FIRST YEAR (AGE 13-14).

70-45. (St.-Ft.Fl.Op.) Lung. o. & touch floor.

SECOND YEAR (AGE 14-15).

71-42. (St.-Ln.O.-U.Bd.) Alt. Am. stretch. u.

72-45. (St.-Ft.Fl.Op.-U.Bd.) Lung. o. with alt. Am. stretch. u. & b.

73-43. (St.-Ln.O.-1 Am.U.-1 Am.B.) Am. chang. with stretch. or swing.

THIRD YEAR (AGE 15-16).

74-44. (St.-U.Bd.) Moving f. by lung. o. with alt. Am. stretch. u. & b.

75-46. (St.-Ln.O.-Hn.Hp.) Tr. turn.

76-47. (St.-Ln.O.-U.Bd.-Tr.Tn.) Am. stretch. s. (u.).

MARCHING EXERCISES.

FIRST YEAR (AGE 13-14).

- 1- 7. March on the toes.
- 2- 9. March with 4 light steps and 4 heavy steps.
- 3- 4. March with varying speeds.
- 4- 8. March with long steps.
- 5-10. March with short steps.
- 6-13. March f. & change direction to b.
- 7-15. March forming 1 file from 2 files and 2 files from 1 file.
- 8-17. Mark time increasing and decreasing intervals.
- 9-18. March increasing and decreasing intervals.
- 10-22. March with Kn. rais.
- 11-29. Slow march on toes f. & b.
- 12-24. March & halt with turn. l. or r.
- 13-26. March s. on toes (rank or circle with or without hands joined).
- 14-27. Hop march.
- 15-30. March & half with turn. about.

SECOND YEAR (AGE 14-15).

- 16-31. March s. changing to f.
- 17-32. Slow march with Kn. rais. & Lg. stretch. f.
- 18-28. March backwards.
- 19-35. March with Lg. stretch.
- 20-33. March f. changing to s.
- 21-36. March s. with turn. about.

LEAPING EXERCISES.

TYPES.

- I. Game forms.
- II. Rhythmic jumps.
- III. Jumping :—
 - (i) Introductory Jumps.
 - (ii) High, Long, Hurdle, and Downward Jumps.
- IV. Vaulting.

I. GAME FORMS.

See page 192.

II. RHYTHMIC JUMPS.

FIRST YEAR (AGE 13-14).

- 1-21. (St.-Toe F.) Hop. with Ft. chang.
- 2-16. Tapping step.
- 3-12. Asd. jump. turning about in the jump following each fourth count.
- 4-15. (St.-Kn.Fl.Bd.) Skip jump.
- 5-23. (St.-Toe S.) Hop. with Ft. chang.

SECOND YEAR (AGE 14-15).

- 6-20. Swinging step (on the spot, & moving f.).
- 7-12. Asd. jump moving f. to 8 counts, & turning about in the jump following each eighth count.
- 8-12. Asd. jump moving f. to 8 counts with Am. swing.
- 9-12. Asd. jump with Kn. bend.
- 10-12. Asd. jump moving f. to 4 or 8 counts, turning about in the jump following the fourth or eighth count, moving b. to 4 or 8 counts, turning & moving f. &c.

THIRD YEAR (AGE 15-16).

- 11-20. Swinging step with 1 Am. swing. s. (m.). (Later, also with opp. Am. swing. f.).
- 12-24. Hopping with Kn. rais. & opp. Am. swing. f. (Later, also with the other Am. swing. s.).

III. JUMPING.

(i) *Introductory Jumps.*

FIRST YEAR (AGE 13-14).

- 13-26. U. jump, controlled form. (various).
- 14-26. U. jump with $\frac{1}{4}$ turn, later with $\frac{1}{2}$ turn.
- 15-27. F. jump, controlled form.
- 16-28. B. jump.

LEAPING EXERCISES.

- 17-26. U. jump with Am. swing. s.
- 18-26. U. jump with Am. swing. f. & d.
- 19-27. Two (Three) steps & F. jump. (T.C., later C.C.).
- 20-27. One step & F. jump with $\frac{1}{4}$ turn.
- 21-27. Two (Three) steps & F. jump. with $\frac{1}{4}$ turn.
- 22-27. Three steps & F. jump, land & jump u. off both feet (later jump f. on landing, & later over a rope).
- 23-27. "Seven jumps."
- 24-27. "Seven jumps," land. on last line with both feet & jump. f. into circle or over marked space (later over low rope ; later still, Asd. vault to sit asd. horse lengthw.).

SECOND YEAR (AGE 14-15).

- 25-26. Twice (or more) U. jump with $\frac{1}{4}$ turn in each jump.
- 26-26. U. jump with Am. swing. f. & u.
- 26A-29. One step & S. jump.

THIRD YEAR (AGE 15-16.).

- 27-26. U. jump with Lg. swing. s. (later also with Am. swing. s.).
- 28-26. Twice U. jump with $\frac{1}{4}$ turn in each jump ; later with $\frac{1}{2}$ turn.

(ii) *High, Long, Hurdle and Downward Jumps.*

FIRST YEAR (AGE 13-14).

- 29-30. Run. Hi. jump, later in stream.
- 30-31. Run. Obl. Hi. jump, later in stream.
- 31-31. Run. Obl. Hi. jump, landing on both feet.
- 32-36. Run. Hi. jump onto low vaulting box landing on both feet and immediate D. jump (later with Am. swing. f. & u.).
- 33-38. Run. Hi. jump with hi. take-off. (Rope & top section of vaulting box).
- 34-33. Run. Long jump.
- 35-40. Combined High and Long jump ("Fence and ditch").
- 36-39. Hop, step and jump.
- 37-34. "As far as you can get in 3 standing jumps."
- 38-36. (Hi.St.) Long jump. (Top section of vaulting box).
- 39-35. Run. Hurdle jump for length over a marked space (landing on one foot and running on).
- 40-35. Run. Hurdle jump over low rope.
- 41-35. Run. Hurdle jump in stream.
- 42-35. Run. Hurdle jump over 2 or more ropes with 3 strides between jumps.
- 43-36. (Hi.St.) D. jump off one foot with other leg swing. f. (Bench).
- 44-36. (Hi.St.) D. jump off both feet. (Bench).
- 45-36. (Hi.St.) Quick Kn. full bend. & D. jump f. (Box, horse, beam).

LEAPING EXERCISES.

- 46-36. (Bal.St.) D. jump s. with one hand grasping beam. (Beam at hip height, later higher).
47-41. (Hg.-Bk.Rst.) D. jump. (Wall bars).

SECOND YEAR (AGE 14-15).

- 48-43. Run. Hi. jump through a "window." (2 ropes on one stand).
49-36. Run. D. jump. (Sloping bench on low beam or another bench).
50-36. Run. D. jump with one hand grasping apparatus. (Sloping bench on beam at shoulder height, later higher).
51-42. (Hi.Sd.St.) D. jump. (Wall bars).

IV. VAULTING.

FIRST YEAR (AGE 13-14).

- 52-44. (St.-F.Gr.) Vault to Bal. Sup. (Beam just over hip height).
53-44. (Bal.Sup.) Dismt. & vault back to Bal. Sup. posn.
54-44. Three steps (later, Run.) & Vault to Bal. Sup.; dismt. b. with (later without) grasp of beam. (Beam at low chest height).
55-45. Run. Asd. vault to sit asd. apparatus; dismt. b. or s. Free form. (Box or horse lengthw.).
56-45. Run. Asd. vault. (Buck lengthw., later crossw.).
57-45. Run. Asd. vault. (:). ["Leap frog"].
58-45. Run. Asd. vault to st. on apparatus; Asd. dismt. f., or D. jump. (Horse or box lengthw.).
59 45. Cat jump. (Box, horse or bench lengthw.).
60-51. (St.-F.Gr.) Thro. vault to st. on apparatus; D. jump off one foot. (Low beam with saddle).
61-51. (St.-F.Gr.) Thro. vault to sit on apparatus. (Low beam with saddle).
62-51. Run. Thro. vault. (Beam with saddle, or horse with pommels).
63-47. (Sd.St.) Face vaults with bent knees along hz. bench or low beam.
64-47. Run. Face vault with bent knees to sit asd. apparatus; dismt. by swing. legs f. & then b. (Box or horse crossw.).
65-48. (Bal.Sup.) Gate vault. (2 beams).
66-48. Run. Gate vault. (2 beams).
67-49. (Sd.St.-Lg.B.) Obl. Bk. vault. (Beam).
68-49. Run. Obl. Bk. vault. (Beam).
69-46. (St.-In.U.Gr.) Swing. f. & b., & D. jump at end of b. swing. (2 ropes, later 1 rope).
70-46. (St.-In.U.Gr.) Swing. f. & D. jump. (2 ropes, later 1 rope).
71-46. Run. Heav. vault. (2 ropes, & over section of box, beam or jumping rope).
72-46. (Fr.St.) Jump & swing f. & b., & D. jump in b. swing. (Beam at stretch height).

LEAPING EXERCISES.

SECOND YEAR (AGE 14-15).

- 73-45. Run. Asd. vault to sit asd. apparatus as far forward as possible ; dismt. s. (Horse lengthw.).
- 74-45. Run. Asd. vault. (Horse with pommels crossw.).
- 75-45. Run. Asd. vault. (Horse or box lengthw.).
- 76-45. Run. Hz. Asd. vault over rope. (Rope & low box lengthw.)
[First trials without the rope].
- 77-51. Run. Thro. vault with one leg leading. (Low beam with saddle ; later, horse with pommels).
- 78-51. Run. Thro. vault to st. on apparatus ; D. jump off both feet, later with Am. swing. f. & u. (Box or horse crossw.).
- 79-47. Run. Face vault, at first in free form. (Beam or box crossw.).
- 80-49. Three steps (later, Run.) Obl. Bk. vault to sit asd. apparatus ; dismt. by swing. legs b. & then f. (Horse or box).
- 81-49. Run. Obl. Bk. vault. (Horse, box or beam).
- 82-49. Run. Obl. Bk. vault with shoot f. (Horse, box or beam).
- 83-46. (Fr.St.) Jump & swing f., & D. jump over marked space. (Single beam).
- 84-46. (Sd.St.) Obl. Heav. vault. (2 beams).

THIRD YEAR (AGE 15-16).

- 85-45. Run. Asd. vault b. to sit asd. apparatus ; dismt. b. or s. ; free form. (Box or horse lengthw.).
- 86-45. Run. Asd. vault b. (Buck lengthw.).
- 87-51. Run. Thro. vault to st. on apparatus, & immediate D. jump off both feet, later with Am. swing. s. (or f. & u.) (Box or horse crossw.).
- 88-51. Run. Thro. vault. (Box or horse crossw.).
- 89-47. Run. Hi. Face vault. (Low box crossw.).
- 90-47. Run. Handspring vault. (Low box crossw.).
- 91-49. Run. Bk. vault to sit asd. apparatus ; dismt. s. with leg swing. b. & then f. (Horse or box crossw.).
- 92-49. Run. Bk. vault. (Beam, box or horse crossw.).
- 93-46. Run. Heav. vault. (Single beam & over jumping rope or horse).
- 94-52. (Asd. Sit.) Lg. swing. b. to Sd. Sit., & b. to Asd. Sit. (Horse or box).
- 95-52. (Asd. Sit.) Lg. swing. f. to Sd. Sit., & f. to Asd. Sit. (Horse or box).

FOURTH YEAR (AGE 16-17).

- 96-45. Run. Hz. Asd. vault. (Box or horse lengthw.).
- 97-45. Run. Asd. vault b. (Horse lengthw., at first sloping.)
- 98-51. Run. Thro. vault with one leg leading. (Box or horse crossw.).

LEAPING EXERCISES.

- 99-47. Run. Face vault with hi. take-off. (2 beams, beam & bench, or box).
100-46. Run. Heav. vault. (2 beams).
101-52. (Asd.Sit.) Lg. swing. b. to Sd. Sit. facing opp. direction, & b. to Asd. Sit. (Box, horse).
102-52. (Asd.Sit.) Lg. swing. b. to Asd. Sit. facing opp. direction. (Box, horse).

AGILITY EXERCISES.

FIRST YEAR (AGE 13-14).

- 1- 1. Forward roll.
2- 1. Two forward rolls consecutively.
3- 1. Running forward roll and stand up.
4- 3. Introduction to Hand-standing. [(Bt.Fr.Sup.) Lg.kick.u.].
5- 4. Introduction to Hand-spring over a back.
6- 1. Running forward roll to spring up and run on.
7-10. Introduction to Cartwheel.
8- 2. Backward roll.
9- 3. Introduction to Hand-standing (:).
10- 5. Head-standing position on mat or against wall, later with (:), later still without support for legs.
11- 4. Introduction to Hand-spring over high backs.
12- 3. Hand-standing with support against wall (::). (Later, without support).
13- 6. Head-spring over box lengthways (begin with box at knee height).
14- 3. (Knee hanging) Swing down through Hn. St. posn. (Ladder ; later, beam).
15- 3. (Hi.Bk.Ly.) Swing down through Hn. St. posn. (Beam with saddle).

SECOND YEAR (AGE 14-15).

- 16- 3. Walk on hands.
17-10. Cartwheels (free practice ; later along chalk line).
18- 6. Head-spring over pad.
19- 4. Standing Hand-spring from low box.
20- 6. Head-spring on mat.
21- 4. Running Hand-spring (hands on pad).
22- 4. Hand-spring from supporters' knees.
23- 4. " Kicking horse."
24-10. Cartwheels in files at command.
25- 3. Hand-standing, throwing legs up together.

AGILITY EXERCISES.

- 26- 6. Running Head-spring.
- 27- 7. Back-spring.
- 28- 4. Running Hand-spring (hands on mat).
- 29-10. Cartwheels, bringing legs together overhead.
- 30- 9. Standing Dive over low rope.
- 31- 3. (Hn.St.) Am. bend.

FOURTH YEAR (AGE 16-17).

- 32- 4. Running Hand-spring, throwing legs up together.
- 33- 3. Roll backwards to Hand-standing posn.
- 34-11. "Spin the man."
- 35- 9. Running Dive over low rope.
- 36- 6. Two or more consecutive Head-springs.
- 37- 8. Hand-spring, Head-spring and Back-spring consecutively.
- 38- 3. Hand-standing position followed by Forward roll.
- 39- 9. Running Dive over rope or low vaulting box, over bench or back of another boy, &c.

The Government accept no responsibility for any of the statements in the advertisements appearing in this publication, and the inclusion of any particular advertisement is no guarantee that the goods advertised therein have received official approval.

DOCUMENTS ISSUED BY THE BOARD OF EDUCATION RELATING TO PHYSICAL TRAINING.

1. Syllabus of Physical Training for Schools, 1919.*
2. Circular 1138, "Revised Syllabus of Physical Exercises."
3. (Withdrawn).
4. Circular 1291, "Organisation of Physical Training."
5. Physical Exercises for Children under Seven Years of Age, with Typical Lessons.*
6. Suggestions in regard to Games.*
7. Physical Exercises for Rural Schools, 1924.*
8. Physical Training : The Team System. (Appears also as an Appendix in later issues of No. 1, Syllabus of Physical Training for Schools.)*
9. Memorandum on the Planning and Equipment of a Gymnasium for a Secondary School.*
10. Memorandum on Physical Education in Secondary Schools.*
11. Memorandum on Physical Education in certain Schools and Classes which are able to give a more extended training than that provided for in the Board's Syllabus of Physical Training.*
12. Syllabus of Physical Training : Extension for Older Girls.*
13. Reference Book of Gymnastic Training for Boys.*

* On sale at H.M. Stationery Office (for addresses *see* title page).



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